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FUTURE TRENDS IN MEDICINE

EDITORIAL

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Guest Editorial

DR. LOU HARNICK

Born in Toronto

1943 *Gradnated in Medicine from the University of Toronto.*

1943-6 *He joined the army and ranked as Captain.*

1946-9 *Posigraduate training in radiology at Toronto Western Hospital; Massachusetts General Hospital, Boston; and the Karolinska Inst., Stockholm, Sweden.*

1951 *Returned to T.W.H. and became radiologist-in-Chief.*

1971 *President of Can. Assoc. of Radiologists.*

1973 *President of the O.M.A.*
He is a Fellow of the Royal College of Physicians of Canada (F.R.C.P.),
Fellow of the American College of Radiologists (F.A.C.R.), and Associate Professor of Radiology at the University of Toronto.

The Oxford Dictionary has the following definition of Profession – "The occupation which one professes to be skilled in and to follow – a vocation in which a professed knowledge of some department of learning is used in its application to the affairs of others or in the practice of an art founded upon it – applied specifically to the three learned professions – divinity, law and medicine". To this one might add – a group which is granted by law the rights of self government and self discipline in the interests of society.

Our profession, as are all others, is being subjected to critical and careful scrutiny by society and if one accepts the lay press as a measure of public opinion, is being found wanting. If as a profession we do not serve the public interest then that privilege which identifies us as a profession may be withdrawn. This possibility is the greatest threat to the profession and fortunately the ability to remove this threat lies within the hands of each of us.

Undergraduate education provides a base for a lifetime of study. Post graduate education and continuing practice provides the skills necessary for the application of this knowledge to the affairs and benefit of society and as Osler put it "study until 24, investigation until 40, profession until 60, at which age I would have him retired on a double allowance". The physician enters society professionally well equipped to meet its demands and as undergraduates you need have no doubts in this regard. However, some criticism might be made as to how the physician responds to the privileges society gives him.

It is reasonable to accept the dictum that in a small, privileged and easily identifiable group, what each member does reflects with credit or adversely on all the members. This applies to questions of how one practices, how one takes his place in society generally, how one relates to the health professionals, and how one puts a value on his services.

There is every reason to believe that society will be served best when the actions of a physician can be assessed by his peers. Professional self-government is the key to the continuing of good medical care and its improvement. The primary factor to the maintenance of this self-government is the realization that every physician as an individual is involved in it, and if he acts and does as he has been taught and learned, then there is no threat or danger to the profession.

February 12, 1973.

Dr. L. R. Harnick, M.D.

Richard D. Fisher, B.Sc., 7T3

An Interview with the Minister of Health

It is becoming increasingly evident that the architect of future medical practice in Ontario will not be the medical profession. The autonomy once enjoyed by physicians is steadily being eroded by government policy buoyed upon public sentiment. Salary, limitation of specialization, regionalization, lay control all are rumoured to be awaiting the physicians in the near future.

The Ontario Government, hard pressed to pay for the mammoth costs involved in the health care scheme it first introduced in 1966, has in turn put pressure upon the medical profession for what it calls "abuses" against the medical insurance plan. Over-servicing is now thought, in government circles, to be so rampant that its eradication would make the health budget "liveable". It is no wonder that the government is having its auditors keep a watchful eye upon medical practitioners to curb this new strain of malpractice.

Almost daily, newspaper articles announcing new breakthroughs in medical research are accompanied by those accusing the physician of earning too much money, of overbilling, of inaccessibility, and other fraudulent activities. To the public the doctor must appear as too lazy, too rich and too fat. He has become the scapegoat for all the ills of the government sponsored health insurance plan.

With these emergent attitudes in mind the University of Toronto Medical Journal interviewed the man who is now spearheading the Government's assault upon the medical profession, Dr. Richard Potter, Minister of Health for the Province of Ontario.

The dialogue to follow occurred in January of this year in the Minister's spacious offices located in the Hepburn Wing of the Provincial Buildings. Dr. Potter graciously consented to the interview despite a busy schedule and an obviously painful back condition. It was my purpose to provide Dr. Potter with the topics upon which he could elaborate present government sentiments. His "shape-up-or-ship-out" message is presented as follows.

JOURNAL: Dr. Potter, what will it be like to practise medicine in the Province of Ontario five years from now? Will the Government be in total control of the medical profession?

DR. POTTER: Well, that's a good question. I sincerely hope the Government won't be in total control of the profession and I think the decision as to whether or not they will be depends on the profession and the way the profession conducts itself in the future.

I've spoken on several occasions on this subject, which the Medical Legal Society of Ontario asked me to speak on. As a matter of fact, the self-governing professions are on trial and this is exactly the situation we're in today. We can talk and argue all we like about what doctors are abusing OHIP or why the cost of medical care continues to rise or whether we should have denturists practising independently or not, but really these aren't the big issues. I think the big issue is just exactly that — is the medical profession and are other professions going to continue to be allowed to be self-governing professions? And the answer to that lies in the reaction of the professions. There's no secret and I think that you'll appreciate that within the past year, the College of Physicians and Surgeons has itself assumed a much greater role than it ever had before. As a student and as a practising physician, I was always of the opinion that the College of Physicians and Surgeons was a licensing body; that it was interested in obtaining my annual fees and renewing my licence and that was it. That's how it has been going on for years. It has had a disciplining role which has been an insignificant one and it has only been with the advent of prepaid medical care that it has finally realized that it has a much bigger role to play.

The College has asked me for permission to send teams to hospitals to audit the quality of care in hospitals. It has already done seventy-five hospitals in the Province. It has asked and has received permission to visit doctors in their offices and audit the quality of care and the type of practices that they do, so that, really, to answer your question, I'd have to say we'll have to come back two or three years from now.

However, I think the profession is reacting very favourably. I think that the profession is generally very anxious to show the public that it is capable of self-government; that it is capable of looking after cleaning its own house; that it is capable of disciplining any errant members of the profession that do step out of line not only with irregular practices, but by trying to beat the insurance plan — I'm confident it will, so I don't think there's going to be that big a change.

At the present time in Ontario, we have approximately one-third of the physicians practising on a fee for service basis, one-third who are on contract working for Government or Universities, and then we have about one-third working in partnerships or clinics. This year, in talking to doctors across the Province, I find that there's a much greater tendency for doctors to say:

"You know, I wouldn't mind being on a salary."

Heavens, five years ago, this was something people wouldn't even mention. There was no way they wanted to be on a salary! But when the doctors start looking around today and see some of the advantages that accrue from group practice where you have more or less regular hours, where you have your holidays, your superannuation, and almost all the other fringe benefits that labour gets, they begin to think:

"Well, you know, maybe we're crazy trying to insist that we continue in solo practice and never see our families, working day and night."

Physicians today are much more willing to say:

"Let's share our responsibility and work together more."

So that I anticipate that we will probably have more group-type of practices than we have today.

Certainly, the fee schedule is one that I think needs reviewing. I think there are many inequalities in it. One way or another, we have to sort it out. At the present time, there is a group of doctors meeting with the Ontario Council of Health looking at our fee schedule and hopefully, they'll make some recommendations to me.

As you know, the OMA established a fee schedule. We in government have never established one. I am anxious now to get the opinions of doctors all over the Province, not just from organized medicine, but from everyone, to determine what their views are on it — not only just for doctors, but for the other paramedical fields; chiropractors, chiropodists and such. The fee schedule is now such that it can be abused and we have evidence to suggest that in some cases, mind you again, it's a minority, but in some cases, it is being abused and we must find some ways to change it so it can't be abused. If the profession takes the leadership in correcting these inequalities and these abuses, why then naturally there's no way the public can say that if the profession is unreliable, that it is unjustified in continuing as a self-governing body. I think that it is.

JOURNAL: Is it inevitable that the physicians in this Province will be salaried in the near future?

DR. POTTER: I don't think so. This again is what we're looking at. It would be easy to say to put everybody on salary. But is that the answer? We're trying to learn from the experiences in other jurisdictions. For instance, in the National Health Services in Great Britain, where they've had more than any place else and as recently as September, they said to me that salary isn't the answer. Capitation isn't the answer. There has to be an incentive built into it!

And it's perfectly logical. Why shouldn't there be an incentive built into it because medicine is the same as other fields today. A person isn't going to be prepared to put in the long hours unless he's paid for it in one way or another. So that at the present time, it would look to me as though if there's going to be a change, there would have to be some alternative. There would have to be some sort of a salary plus a fee — I don't know. However, there hasn't been any decision made. We haven't got enough evidence at the present time to say that this is, in fact, the best way of doing it either.

As you know, we have some clinics in Ontario that are operating on capitation and the physicians there are on salary. The information that we are accumulating from here hasn't proved to us yet that it's more economical from the taxpayer's standpoint or it is any better from the patient's standpoint. So if it isn't better and it isn't more economical, there's no point in changing what we have now just for the sake of change. When we're going to make the change, let's make sure it is an improvement and if it's not going to be an improvement, let's not do it.

JOURNAL: Most medical students are well-acquainted with the generous bursary and guaranteed incomes offered by the Ontario Government for work in rural and small town settings across Ontario. Will lack of General Practitioners in these areas force the Ontario Government to oblige its future medical graduates to practise in these areas before they specialize?

DR. POTTER: This has just been suggested in conversation by one or two individuals in the teaching profession. It's never been considered seriously. We have never given any consideration to obliging anybody to practise in any particular part of the Province. I don't see how you can select one segment of society and say we're going to tell you where to work, but we're not going to tell anybody else where to work. No! We, at the present time, are concentrating on incentives in the way of grants to start up practice or guaranteed income. They're the most successful. The bursaries that we started haven't been quite as successful. There have been apparently about a two-thirds drop-out rate of the ones that are going there, so that we're only getting one-third delivery. We feel, at least I feel, that we should take a good look at this and see if there is some better way of doing it. We are willing to explore any way of encouraging people to practise there, but certainly there is no indication at the present time that anybody's going to be *told* you must go here or you must go there. I'd be reluctant to do that.

I suggested some weeks ago (again, it was suggested, but it didn't come out in the papers that way), that in the future, we may have to consider restricting licensing of foreign graduates to areas where they're needed because, I said then, that we may well find that we're getting overloaded with some types of specialists in our larger urban areas where we don't need them and, in the rural or northern areas where we do need them, they don't go. I said that in the future we may come to the stage where we might have to say:

"Okay, if you want to come to Ontario to practise, why this is fine, but you have to practise where we need you, not where you want to go".

Unfortunately, that's not the way the newspapers carried it. They thought I was talking about doing this at the present time. Of course, there's no indication of doing this now.

JOURNAL: And you don't anticipate any limits to what proportion of the medical graduates will be able to specialize?

DR. POTTER: Yes, we do anticipate that. We're finding now, for instance, that we won't say we'll limit the numbers that are going to specialize. We're finding now that in the courses we're giving here, we're getting too many, say, general surgeons specializing and not enough in other specialties, and, of course, not nearly enough family physicians. We're going to encourage people to go into the specialties where there is need and point out to them that they aren't needed in other specialties. They're going to find, eventually, I suppose, as they have in Great Britain, that because you have qualifications doesn't necessarily entitle you to get on a staff of a hospital. If there are enough doctors already serving that area, then there's no sense in bringing in another one.

JOURNAL: In an interview in the Medical Post last April, you indicated that there will have to be other ways of treating chronically ill or convalescing patients other than in the acute care hospital. Will the emphasis on the doctor of the future be towards less hospital practice?

DR. POTTER? Well, yes, I think the emphasis should be on trying to keep people in their homes, treating them in their homes as far as possible with the assistance of paramedical personnel that are provided through the Home Care Program.

We are in the process of developing our program. Now, I don't think enough emphasis has been placed on rehabilitative medicine and I think that our hospitals should have attached to them a rehabilitative wing, one in which patients, as soon as they're over the acute phase of their illness, particularly the orthopaedic patients, and those with strokes and such, can be rehabilitated, have proper physiotherapy, psychotherapy or occupational therapy. When I talk about the need for increased house calls, I'm not suggesting that doctors should be going around to see children who have the sniffles and people who have sore throats, but what I am saying is that we have too many complaints of patients who are very acutely ill who can't get to a doctor's office and the physicians haven't been able to come and see them. This is the type of case in which, as a physician, I know you can find time to go. I do feel that if a patient is acutely ill and needs the services of a doctor at home, that he should be seen at home and then he could be turned over to the Home Care Program to be looked after and that way stay out of the hospital unless he is seriously ill.

JOURNAL: With the high cost of hospital care, $60.00 to $70.00 a day, do you see any standardization towards how long a patient can stay in hospital after a certain elective procedure?

DR. POTTER: Well, this is being done in many hospitals today. The Ontario Health Association is working out with its hospitals standards which they feel would be the average length of stay and is using this in many hospitals today in what is called a red tab system, whereby the patient is admitted to hospital and there's a tab put on the chart (perhaps you've done it in some of your hospitals). The tab notes when that patient should be transferred or discharged. If he isn't, the doctor then explains there why it is necessary to keep him longer and, in this way of course, the Admission/Discharge Committee of the hospital keeps close tabs on these things. This is what is going on and has been started in several of the community hospitals. It is expanding now and the Ontario Hospital Association is developing this system with the hospitals to try and keep a closer tab on the length of stay of patients.

You've seen enough without me telling you that there are a lot of patients in hospitals that don't need to be there. You sometimes wonder why they're being kept in hospital.

You find that, and really, this again is where the profession has to play a very, very active role in seeing that this is corrected, because, quite frankly, the taxpayers can't afford it. It's not just the $60.00 or $70.00 a day (this goes up to even $100.00 a day in some areas), but it's the astronomical cost of constructing the hospital in the first place. Today, it's an average of $50,000.00 *a bed* to built a hospital. I know hospital administrators will argue with me on that point.

JOURNAL: With the health budget rising to about $2 billion dollars, almost 50% of the total Ontario budget, can a taxpayer really afford total health care envisioned by the Ontario Government in 1966 when it instituted Provincial health care?

DR. POTTER: Well, it's over $2 billion dollars actually — it's about $2 billion, 200 million this year and it's about 35% of the budget. We started off on a program of providing adequate, or what we considered to be adequate, health care and to keep people from becoming financially ruined through illness. But I wonder if we haven't gone too far, in that we're now providing deluxe-type accommodation and service.

And I really feel we are doing just that. I know the press doesn't feel this way, but there's no way we can continue if health costs continue to rise at the rate that they're rising now. I don't know where the money is going to come from to pay for it. Quite frankly, the taxpayers just can't afford it and you know and I know that there are terrific abuses in the program. It's alright for the Globe & Mail, as they did, to criticize me and say I shouldn't criticize the public for abusing the program and I shouldn't criticize the doctors and I shouldn't criticize the hospitals. Well, after all, who else do we criticize? We're all to blame! The doctors are to blame

because they don't get paid soon enough and they allow themselves to be influenced by patients who say:

"I want to go into hospital".
or
"I don't want to go home yet".

They don't stand up to their patients. I know because I've had the experience myself. Patients are to blame for insisting on going into hospital and not attempting to look after themselves or their families at home or for not acquiring home care to look after them. The hospital administration is to blame for not being firmer with its medical staff in seeing that this is done.

I think now that we've reached the stage where the restraints are on. I haven't got the money and the hospitals know it. There's no way I can get it. I've been very, very pleased with their reaction though. They have said they'll operate within their budgets.

We've done our surveys. We know that in some areas they have more beds than are needed. The College of Physicians and Surgeons went in with their surveys and showed us that there are far too many people in hospital that shouldn't be there. When we find, as they found, that as low as 53% of the beds are being properly utilized, that's pretty damning evidence. Therefore, we've said to some hospitals:

"Look, we're cutting your budget back. If you want to close beds, that's up to you, *but you live within the budget*. Use the beds any way you want to use them."

As far as the physicians are concerned, I've been talking to them now since I've been here and have said:

"Look fellas, we are in very tough times and you have to show me how we can live within the budget".

Somehow or other, we're going to live within it and the doctors aren't going to like it if we start prorating their accounts. As a result, we'll have to cut down on what we're paying them.

But we know there are abuses going on. From the computers, we know that there's over-servicing and so on. They aren't things that you can come up and peg a guy and say that it's fraud. It's not fraud. He's treating people, but does he really need to treat them?

There's enough over-servicing going on that we know that if it was held back, certainly there'd be no difficulty in living within the budget.

In talking to doctors, both as individuals and as groups, across the Province, I am confident that we can do that.

The OMA, at least, the executive of the OMA, feel that they have a responsibility, in that they are the only ones that should talk fees. Well, in talking to doctors throughout the Province, this isn't the general attitude that I got. The doctors throughout the Province think that it's about time that they had a little bit to say.

What we are doing right now is taking a look at the whole thing. I'd like to, as I've said to the OMA on many occasions (they've refused twice to sit down with me to do it), have them sit down with me and the fee schedule and cut out what I call "padding" and cut out some of the unnecessary stuff and come up with a fee schedule that we would pay *100%* of — still within our budget — and get away from the percentage basis entirely and then have it automatically reviewed every two years on a cost of living basis. Then, we would get away from the argument between the press, the public and the doctors every two years about whether the doctors should get more money or not.

The cost of living is going up. Obviously, fees should go up a bit. So far, I've never been able to get the OMA to do that. Yet, I've met with doctors all over the Province and generally their reception to this sort of an idea has been pretty good.

We have this task force of doctors now meeting with the Council of Health. I don't know what recommendations they're going to bring in. I hope they bring in something like that because, quite frankly, I think this would be the best answer — for the profession to have a fee schedule that the Government pays 100% of. Now we know there's going to be 1%, 2% or 3% of the profession that aren't going to like it and they're going to opt out.

That's fine, let them opt out, but once they opt out, let them be like they are in England. You're either in or you're out. If you're in, you get in and you get your money. If you're out, you can set up practice anywhere you want to, but it's strictly on a cash basis. I don't know whether it'll work or not, but somewhere, we have to get this thing sorted out. We can't continue, as you say, to let it continue to rise at that astronomical rate that it's been rising over the past few years.

JOURNAL: Do you feel that the public is taking advantage of this system by seeking specialist consultation without referral from a family doctor for what amounts to really trivial ailments, thereby increasing the cost of health care?

DR. POTTER: I haven't got the figures on this and there's no point in my commenting on it. This is a matter again that the doctors are meeting with the Council of Health about and they're going to make some recommendations on, but I haven't got the figures on it or enough statistics to say whether it is or it isn't.

There's no question, I suppose, that there are specialists who see patients directly, without their being referred, and I personally feel that if they see patients this way, then they should charge them at a family practice rate, not at a specialist rate. A consultant is a consultant,

(Continued on page 128)

Acupuncture

Lorne Direnfeld, B.Sc., 7T5

INTRODUCTION

Acupuncture is the ancient Chinese art of healing. Traditionally, acupuncture was not merely a procedure but an entire system of philosophical medicine. Modern claims for cures using acupuncture therapy are broad and include such varied diseases as asthma, ulcers, hepatitis and depression, as well as some forms of deafness and paraplegia that haven't responded to conventional treatment. Although acupuncture may be over five thousand years old, new discoveries related to pain control and the use of acupuncture during surgery instead of an anesthetic, have caused many physicians throughout the world to look at acupuncture as a revolutionary advance in the history of medicine. Until recently, the only explanations for the effects of acupuncture were based on Chinese philosophy. However, there are now modern scientific theories which attempt to account for the amazing results of acupuncture.

THERAPY VS ANALGESIA

The most important thing to understand about acupuncture is that it is involved in two separate procedures. On one hand there is acupuncture therapy; the therapeutic procedure consisting of the insertion of needles in certain points of the skin. That goes back in China literally thousands of years, into Chinese prehistory. The other procedure in which acupuncture is used is frequently spoken of as "Acupuncture anesthesia", though that is not the proper name to call it. "Acupuncture anaesthesia" is new, and a product of the cultural revolution in China. When Mao-tse Tung asked the western trained Chinese doctors to go to the country and learn what traditional medicine has to offer, a refinement of acupuncture, "acupuncture anaesthesia", resulted.

The second important thing to understand is that it is not really anaesthesia at all. Anaesthesia means the removal of all sensation, whereas in fact, the only sensation removed is pain. It is not really anaesthesia, therefore, but analgesia. We have five skin sensations: touch, deep pressure, warm, cold and pain. Of those, the only one the needling removes is pain. Patients operated upon with the use of acupuncture analgesia have said they felt everything from the knife to the sutures, but no pain.

ACUPUNCTURE THERAPY

The origins of acupuncture therapy are uncertain. The earliest needles employed were made of flint, later they were made of bronze, silver, and even gold. This unique Chinese procedure was probably a chance discovery which proved helpful in treating the sick. Like most empirically derived procedures, acupuncture had to be explained in order to become legitimate. Such an evolution probably took place thousands of years ago. By the third century B.C. acupuncture had been woven into a philosophy of nature containing Confusian and Taoist thoughts. Man was conceived as a small version of a larger universe, a microcosm. Every human being was subject to Tao, the unchangeable force of natural events. In the initial chaos Tao was responsible for the separation of two forces, the Yin and the Yang. This balance within the human body resulted in the normal flow of a life force, the Chi. In health, the Chi flowed evenly throughout the body along an invisible network of twelve connecting canals or meridians. These meridians, corresponding to the months of the year, were established by linking together the points of insertion of acupuncture needles. In the traditional method there were 365 of these points corresponding to the days of the year (different sources disagree on the exact number of points in the traditional system). Traditionally all illnesses were caused by an imbalance of the Yin and Yang, thus affecting the flow of Chi. The acupuncture needles were inserted to restore the lost equilibrium possibly by allowing a discharge of the force in excess. A variation of this procedure was to ignite a small amount of herbs over the acupuncture points instead of inserting a needle. This was called moxibustion. Traditionally, the diagnosis was made by taking the pulse, studying the patient's complexion and condition of his tongue. Pulse taking was an intricate and highly elaborate ritual. No less than six pulses could be obtained from each wrist. Each of these is believed to represent the state of an individual organ.

Some present day practitioners of acupuncture have replaced the traditional methods of diagnosis and treatment with modern techniques. A neurometer may be used to measure the electrical resistance of the skin at the points on the wrists and ankles where each of the twelve meridians cross. The resistance is plotted on a chart and a diagnosis is made. Acupuncture points are then chosen to either stimulate the underactive meridians or sedate the overactive ones. Health is achieved where there is a balance of flow along the meridians. Traditionally, the acupuncture points are found by feeling for them. However, by using the neurometer the position of the points can be verified because they have a different electrical resistance than the surrounding skin. The needles may be placed in the area of the complaint or quite distant from it. Knowing which points to choose for a particular complaint requires many years of training and experience. Traditionally, the needles may be left in position untouched for anywhere from five to twenty minutes. However, they may be manipulated either with an up and down motion, figuratively called "sparrow-pecking", or by rotating. A more modern technique is the use of electro-acupuncture. A small electric current is sent through a needle that barely penetrates the skin and may be left there for a few seconds. Not all contemporary acupuncturists agree with the use of the neurometer and its validity in diagnosis and determining the position of the points.

MECHANISM

Modern explanations for the effects of acupuncture therapy characterize it as a form of "counter-irritation" procedure. Another example of such a procedure is called cupping — the use of a horn or cup, the air content of which is heated and the cup then placed on a predetermined area of the skin. Because of the vacuum inside the cup the skin will be partially sucked up and a bruise produced. This "dry-cupping" is still used today in many parts of Europe. On other occasions small incisions or cuts are made at certain points of the skin before the hot cup is applied. This is called "wet-cupping". The deliberate production of blisters as in moxibustin and cauterization, the use of a hot iron on certain areas of the skin for the cure of many diseases, are also examples of counter-irritation procedures still used today. One of the physiological mechanisms underlying counter-irritation is primarily centred around reflexes linking the skin and inner organs (cutaneo-visceral reflexes). Every segment of the skin is connected at the level of the spine to other nerves serving specific organs. The various skin irritations produce local substances capable of acting as nerve transmitters. The greater blood flow induced by this irritation is matched by a similar effect in the corresponding organ through reflex action. To these effects of the autonomic nervous system some hormonal changes and an increase in white blood cells which is associated with stressful situations can be added. Such stress may be triggered by pain stimulations using a needle, blade or hot iron. A situation results in which the body is prompted into achieving a greater response which could possibly make all the difference in overcoming the disease. Whether we are dealing with acupuncture needle insertions, painful bruises from cupping, burns from cauterization or moxibustion, they probably all act through a similar mechanism. In the absence of any active drugs, such a reaction could make a difference between health and disease or even between life and death.

ACUPUNCTURE ANALGESIA

The recent development of acupuncture analgesia has revolutionized anaesthetic technique in China. There have been about five hundred thousand operations performed in China using this technique. Needling is begun about twenty minutes before the operation to induce analgesia. Acupuncture analgesia works best when the nerves stimulated by the needling enter the spinal cord at the same level as the nerves carrying the painful stimulation. For example, in an operation to remove a lung, the needles would be inserted in the arm of the patient on the ipsilateral side. The needles may be manipulated by the anaesthetist or may be attached to an electronic stimulator which causes the muscle in which the needle is inserted to twitch, thus moving the needle. The patients are premedicated and sedated as they would be using conventional (Western) anaesthesia. However, the only real "pain killer" is the needle being moved in the patient's skin. This method of pain control works empirically and is used on that basis, however there are attempts being made to explain in scientific terms the effects of the needling. These explanations have no relatoin to those for acupuncture therapy.

MECHANISM

The basis for the present explanation of acupuncture analgesia can be found in a paper called "The Gate Control Theory of Pain", by Melzack & Wall, Science 150:971, 1965. The Chinese at the Institute of Physiology of the Academy of Sciences in Changhai have also arrived at the same explanation, but their work was directed at explaining acupuncture analgesia, while the work of Melzack and Wall was aimed at an explanation of pain. The clue to understanding what goes on in acupuncture analgesia is in the realization that of all the skin sensations the only one the needling suppresses is pain. The other skin sensations probably involve the presence in the skin or in the deeper tissues of special receptor organs, so-called end organs. But pain is probably picked up by "free" nerve endings. It takes a strong and quite unspecific stimulus to elicit pain. In any large nerve there are generally three populations of nerve fibres, large, middle-sized and small. Pain is carried on the smallest fibres (c fibres). What the needling is doing is stimulating the larger (A-fibres:touch sensation) and middle-sized nerve fibres: their excitation carried into the central nervous system supresses the activity of the small nerve fibres that are carrying the pain excitation. This supression is said to occur in the spinal cord (perhaps at the level of the substantia gelatinosa), the brainstem, midbrain and thalamus. Thus, the stimulation of the large (touch) fibres blocks the information coming in from the small (pain) fibres and so the needling (stimulating large fibres) blocks the perception of pain. The needling may be reinstituted to relieve pain after the operation.

The three most common problems with acupuncture analgesia are: 1) frequent lack of abdominal muscle relaxation in the conscious patient, making certain procedures more difficult (e.g. hernia repair); 2) anxiety in patients who prefer to be asleep during an operation performed upon themselves; and 3) the fact that acupuncture analgesia does not work about 10% of the time (conventional anaesthesia is then used). The major advantages to acupuncture analgesia are that it allows the patient to remain conscious and in full control of all his vital physiological functions. It is safe for older or more feeble patients (respiratory or liver problems) who may not tolerate conventional anaesthesia, and it is very inexpensive.

Many western doctors feel that acupuncture analgesia depends upon and is some kind of disguised form of hypnotism or suggestion. However, acupuncture analgesia has been used successfully on infants down to one and a half days old. But the crux of the refutation that

(Continued on page 128)

David Adamson, B.Sc., 7T3

The Integration of Undergraduate Medical Education at the University of Toronto into a Health Care System

PROBLEM

We are coming to the end of a major period in medical history. The Flexner report of 1911 initiated an era of great progress in research and technology which resulted in a scientific and rational basis for the practice of medicine. And yet this progress has been unable by itself to meet the health needs of our society. Why is this so?

First, progress in the science of medicine has often come at the expense of the art of medicine. Now there is a need for a new synthesis of the human concern for the patient with the scientific concern for the disease. In short, there is a need for the "rehumanization" of medicine[1]. Second, while the quantity of knowledge in medicine has been rising exponentially, the delivery system to utilize this knowledge has not developed with it. "A highly sophisticated body of technology and knowledge lies in our professional warehouse. A vast public demand seeks these wares, and we have neither the necessary personnel nor organizational system to deliver the goods"[2]. This inordinately bad planning is partially the fault of public policy makers and partially the fault of the profession. We now need jointly to accept the responsibility of drastically revising the present system to remedy these deficiencies. Third, the nature of the maladies which affect mankind have changed. In the past, infectious diseases were the major concern of the medical profession. Today, these have been largely controlled while physical and mental illnesses with multifactorial social etiology are presenting with increasing frequency. Modern medicine has yet to effectively address itself to these problems, and more especially to the greater challenge of their prevention.

SOLUTION

With the problems now defined, we must set objectives for any new system designed to solve them. The system must provide necessary, easily-available, high-quality health services within economic limits imposed by society's total resources, yet must be flexible enough to respond to the scientific and social challenge of the future. These objectives can be met by a system which has enlightened centrally-determined policy guidelines, yet allows sufficient local autonomy to respond to special needs, and most important, encourages individual initiative. "Reconciling the needed planning and control with the rights of the individual is a political and administrative challenge that must be met if the system is to be workable"[3].

The province should retain the major responsibility and ultimate approval for planning, allocation of resources, and evaluation.[4] The province should be divided into regional health areas according to similar health service needs. These regions should receive global budgets to be allocated by Regional Health Service administrative bodies. Within a district, one or several Regional Health Centres should be established. Each should comprise sufficient resources to meet the total health needs of its community. This should include at least one hospital in the Regional Health Centre, several peripheral hospitals, rehabilitation centres, chronic care homes, nursing homes, community clinics, the whole spectrum of social services, and any other service which might be necessary to fulfill the health needs of that community. The Regional Health Centre would have a certain amount of autonomy in determining those needs. Peripheral hospitals would have specialists, family physicians, specialized social services and community clinics attached to them. Control of larger resource institutions such as rehabilitation centres would remain with the Regional Health Centre. At least one Regional Health Centre within each region should be an Academic Health Centre, associated with a university, with additional responsibilities for referral service, education, health research, academic leadership and advising government on health policy. Physicians and other paramedical personnel should have the option to practise within or without this system, and with reasonable access to it should they prefer the latter.

It is immediately obvious that, in addition to the present medical personnel utilized in our "medical care" system, this "health care" system will require several new types of paramedical personnel. Also, a "new type of leadership will be needed if the intellectual, technologic, economic and social problems are to be resolved in a rational way . . . Leadership in the future must therefore almost certainly come from a new breed of 'health-information scientist', who within himself incorporates the breadth of knowledge and experience that will permit him to function as innovator, planner, and educator. Medical sciences, computing science, decision theory, operations research, industrial dynamics, systems analysis and the application of behavioural sciences to large social systems will be some key tools of this new profession"[5]. And yet, many of the needs of such a system will only be met by increased participation on the part of all practitioners.

Most important, the active and responsible involvement of people in their own health care is essential.

> "Health care is becoming more and more accepted as a right. This idea must be defined and acceptable boundaries placed on it, if society is to give rational direction to the planning, financing, development and

evaluation of health services. Just as the concept of right must have its limits defined, so also must the idea of choice for the individual whether as recipient or as provider of service. These two concepts must be consistent both with the prevailing ethical and moral basis in Canadian society and with the willingness and capacity of society to allot the necessary resources for the attainment of broad health objectives"[4].

"We must accept the concept that health is a necessity, but realize that society can only guarantee access to health service, but not health itself"[6]. A certain amount of responsibility for health maintenance must remain with the individual and his family.

Role of Medical Education

Although implementing a new system of health services is a multi-faceted problem, no task will be so important as that of designing an educational system for medical doctors. Mr. Stanley Martin, Deputy Minister of Health for Ontario, claims that doctors will be the "keystone" of any new system. Therefore, no matter what challenges are accepted, our success or failure in dealing with them will in large part be determined by the quality of our undergraduate education program.

This program must, therefore, meet certain educational objectives. It must provide the physician with the necessary diagnostic, therapeutic and humanitarian skills to function as a healer, provide sufficient physicians for society's needs, orient the student towards the health care system concept, expose him to sufficient medical sciences that he is equipped to continue his education, and develop his ability to play a leadership role in the planning and organization of the health care system.

In addition, undergraduate medical education must fulfil several broader objectives. It should help the individual develop his intellect and problem-solving ability. It should whet his curiosity, challenge his intiative and imagination and impress upon him the necessity and desirability of continuing education. Finally, it should acquaint him with the cultural aspects of life, and most important, help develop strong character. In summary, the role of medical education will be "to provide an educational experience designed to equip our students with the ability to confront the widespread challenge of contemporary medical practice with the creative intelligence and compassionate instincts expected of our profession"[7]. The curriculum innovations required to provide this education will necessitate a major reorganization of the Faculty. These aspects of integration of the undergraduate medical education into the health care system merit examination.

CURRICULUM

Present Status

Recent pressures for radical changes are due to many factors: knowledge explosion, need for relevance to social needs, new educational methods, student restlessness, government involvement in medical care, paramedical resources, the different nature of illness, increased enrolment, economic constraints, a better informed public, more highly educated medical students, desire for more individualized programs, and many others. Despite these pressures, "the traditional system of highly specialized, fragmented, scientific-research oriented education is continuing"[8]. Toronto, for example, has moved to the theoretically radically different systems approach, but not effected much change in practice. We have not provided individual oriented programs and not produced the type of physician required by society. We have failed to take advantage of the opportunity to experiment with different methods of medical education. Our major accomplishments have been the clerkship and the electives program, but in many ways we have fallen behind in educational innovation[9].

Before changing the curricula, two other factors must be considered. One, the knowledge explosion makes it impossible to depend on undergraduate medical education as the only opportunity to acquire all the basic facts of medicine. Much of a physicians practice will be based on knowledge gained after he graduates. Therefore, providing students with the motivation and ability for continuing self-education is one of the most important goals of a modern curriculum[10]. Two, medicine, as a profession, is both a science and a service and the school must prepare students for both. However, "science must take priority over service since it is science which looks to the future while service looks only to the present"[11].

Basic Science

Despite its contribution in the past, the actual value of basic science today seems difficult to evaluate, and strong pressures to decrease the scientific content of programs are present in most schools. Yet, "my anxiety is that if the tree of knowledge is getting bigger, one does not help it grow by trimming the roots, even though their value is below the surface and not easily measured"[12]. However, it may be necessary to modify the presentation of basic science. Students may have to acquire this training in the Faculty of Arts and Science before entering medical school. More self-study, "modular instruction" and "dry laboratories" or demonstrations should be used. A better integration of basic science and clinical medicine should be achieved, with courses "woven into the entire continuum of education"[2]. Elective time should be used to allow students in later years to return to basic concepts and research, if they so desire. Basic science must have leads into the Academic Health Centres, allowing better integration of this essential part of our education with the more immediate problems of clinical medicine.

Clinical Teaching

"From the beginning of their education, medical students must be exposed to the real world of health

care"[2]. At Toronto, this means an increased emphasis on ambulatory care, and the social aspects of disease. This will involve experience not only at teaching hospitals, but also peripheral and rural hospitals, community and private clinics, medical outposts, paramedical resources, and private physicians' offices. These changes will occur slowly due to the widely held faculty belief that only "teaching hospitals" can adequately provide undergraduate education programs[13]. This feeling exists despite the fact that "if a medical faculty does devote its attention to problems of community practice outside the university centre, it will . . . see kinds of illness, types of patients, interpersonal relationships, and circumstances of patient care quite different from those in the university setting"[14]. A British study of clinical clerkships in five different settings[15] has provided some interesting data. The traditional teaching hospital setting has two advantages: students do a more thorough workup and see themselves as giving responsible and personal patient care. Community hospitals also provided the student this latter feeling, in addition to giving him a well-rounded out-patient experience. Specialty hospitals and medical-specialty clinics were thought to be most useful after a general clerkship program. Finally, the chief advantage of clerking in a private office is that students are exposed to the style of practice most of them will engage in after medical school. This advantage is often curtailed by the preceptors' inability to let the student become actively involved. It may be more difficult than we presently assume to find sufficient number of the type of physician who will.

It is evident also that the "systems" method of teaching will not continue in its present form. The episodic peak loads placed on staff and patients is rendering the system less than desirable, if not unworkable. With several Academic Health Centres, it will be possible to have a varied approach to clinical teaching, hopefully with some of the following innovations: greater use of self-study, small seminars and one-to-one physician-student contact, earlier clinical experience, fewer attempts to cover all of the material didactically, with detailed outlines being distributed in advance, and a clinical preceptor program[16]. As is done in the Soviet Union, groups of ten to twelve students may be kept together in clinic groups for three years to reduce the impersonality of the large school[17]. More elective time in longer blocks should be available. The clerkship should emphasize the undergraduate participating more as a "doctor" rather than as a student, and might be lengthened to eighteen months. However, in the final analysis, success will depend upon a clinical program which is oriented towards social health needs and provides quality student-patient and student-clinician contact.

Ambulatory Care

"If the educational process to produce the family physician is to be complete, then it must have its beginning in undergraduate medical education"[18]. Medical schools have responded to this need by creating departments of family practice, divisions of community medicine, programs in social medicine and a variety of other academic and administrative units, all engaged in the creation of educational programs intended to strengthen the health system. By and large the new programs represent a departure from the departmental or disciplinary format of medical education[19]. Nevertheless, total agreement with such programs exists in few schools, especially Toronto. Many believe that ambulatory care is not a discipline in itself, but simply one facet of all the disciplines. Many are concerned that the pendulum may swing too far. As Dr. Hollenberg says, "Ambulatory care is important, but should not become overemphasized. We must train responsible physicians, not 'cough and scratch' doctors". Because of similar, widely held feelings, the ambulatory care program at Toronto will probably not evolve as rapidly as could be desired into a more central role in undergraduate education.

HEALTH CARE SYSTEM

Health

"Perhaps the greatest unsolved problems in medicine today are medico-social, and many are preventable. These include automobile accidents, industrial health, environment pollution, smoking, drug abuse, alcohol, psychological stress, and many others. These matters are predominantly medical in result, but we have virtually ignored them in undergraduate teaching and subsequent practice. If the health care system is to deal with these problems, the physician must have a better understanding of the role he is to play"[12].

In addition, "the health care system is inherently multi-disciplinary. The effectiveness and efficiency of the health care system are dependent upon relationships between people, between disciplines and even between different sections of the larger social system. These relationships offer an extraordinary degree of complexity to health care system planning, administration, and education. Medical education must address itself to the fundamental and largely undeveloped problems of multidisciplinary cooperation and system organization[19].

As Dr. Hollenberg has said, "A lot just goes over our heads" insofar as these problems are concerned. Greater emphasis must be placed on psychology, sociology, systems analysis, medical economics and politics to help overcome this deficiency.

Types of Programs

Most educators think it is impossible to educate a medical student in so many aspects of health care in a reasonable amount of time, and so numerous compromise programs have been developed, several being of special interest.

The core curriculum program is based on the general

agreement that it is necessary to outline a core curriculum of basic human biology that all future physicians should learn, regardless of their field. In addition, the student is allowed a large number of electives. This assures a basic medical knowledge yet enables the student to follow his own interests, without restrictions. The objective is an undifferentiated physician.

The integrated program is another method to produce an undifferentiated physician. This involves a six year common course which allows better integration of the humanities, social sciences and medical sciences. The student has greater flexibility in entering and leaving the program. After four years he receives a B.Sc. or B.A. degree and can work towards a masters or doctorate degree at the same time. This program represents "an attempt to move beyond the rigid structure of the traditional program with its sharp separation of the college curriculum, basic sciences, and clinical medicine[10].

The multiple track program is designed to produce a differentiated physician. The concept is widely used in the Soviet Union where the preparation of the general practitioner has been abandoned. A modification of this program is preferable for Canada. After two years of core material, the student can choose a track in medical sciences, clinical specialty, general and family medicine or an "undifferentiated" track. Different methods of organizing the tracks have been proposed, for example, generalist in one track and all others in a different one. To maintain integrity a core of "medical philosophy" predominantly concerned with community and patient health needs, and relating the major medical pathways to each other, should continue through third and fourth year[12]. Studies have indicated that many students should be able to make a reasonable selection of their track by the third medical year[20]. However, a student could change from one pathway to another later if he fulfilled the necessary requirements of the second curriculum.

Providing multiple paths to the medical degree is complicated and initially expensive, but the long term advantages in terms of efficiency would more than compensate for the initial cost and labour.

Other Curricular Trends

The computer will undoubtedly play an important role in the future education of physicians. It is already used extensively to handle routine organizational tasks. Its ability to provide information as a "consultant" to both physicians and paramedical personnel is in many ways eroding into the physician's domain. A more direct effect on medical education will occur since the computer may make the traditional accumulation of a multitude of facts superfluous. More emphasis on decision making processes would be necessary, less on rote learning. These changes might well induce a different type of applicant to medical schools, some more concerned with behavioural sciences and some with the information sciences. This new diversity in medical students' backgrounds and interests will necessitate very fundamental changes in the curriculum[21].

The computer, along with other audio-visual aids should enable teaching methods to be more individualized to the particular student's own needs, interest and learning abilities. It should also give the clinicians more time to spend on a personal basis with the student. The Mustard Report has recommended the building up of a "resource bank" of audiovisual and other teaching materials that would provide a more flexible teaching system[22]. This would also coincide well with the idea of a core library for all major areas of health care[23].

However, there are some disadvantages to this type of teaching. A large expenditure of labour is involved to design, produce and evaluate the material. It is expensive, and it can rapidly become out of date. In addition, the social aspect of learning is important, and individual instruction leaves this out. Therefore, at the moment, this new type of teaching needs research and critical evaluation.

Electives are valuable to enable the student to explore in depth areas of interest, test career choices, obtain experiences not available in the Faculty program, and reintegrate previously learnt material. The only criticisms are that there is not enough time for electives and more clinical specialties should be offered in the early years.

The Mustard Report has recommended "that the health sciences complexes maintain their educational programs as far as is possible on a year round basis, with the objective of reducing the amount of time to graduate individuals from the programs and to attain maximum utilization of personnel and facilities"[24]. It would be possible to have a nine month course for four academic years completed in three years if the student took no holidays. Variations on this type of accelerated learning could ensure that the medical school's facilities were not overburdened. A major constraint would be students' acceptance of the program, although longer elective periods allowing the student to leave the university environment would help reduce this problem. We should be aware, nevertheless, that many students presently spend their summer holidays gaining valuable experience in non-medical areas, and any program entirely removing this opportunity would have some deleterious effects.

Physicians will undoubtedly be working in a team approach with paramedical personnel in the future. This necessitates exposure at various stages to other paramedics. Some medical schools have responded to this by providing common paramedical and medical courses for undergraduates, on the assumption this would encourage later cooperation. Some of them have had difficulty since the different academic capacities of the various health professionals have rendered the courses inefficient. The end result is that the quality of the medical

course is diluted while many paramedical personnel find it irrelevant. More productive interaction can occur at the service level, where in fact the cooperation and understanding is necessary. This would be similar to the present practice in the Soviet Union.

Admission into medical school is becoming increasingly difficult. It is reasonable to hope that the Ontario Government will soon provide funds for expansion of Canadian schools so that Canadian students will have a better chance of becoming physicians. This plan would have to be formulated in conjunction with a policy to limit foreign physicians in order that the province would not be flooded with physicians and increase the cost of health service dramatically. Dr. Potter has already indicated that Ontario should limit the number of foreign doctors licensed to practise[25], and the Faculty of Medicine at the University of Western Ontario already has a policy which bars non-Canadians other than landed immigrants from enrolment[26]. This is a politically sensitive issue, but one which must be dealt with soon, and probably will be.

Numerous attempts are being made to determine criteria for admission. This is a difficult problem as the success or failure of such criteria cannot be determined until many years after graduation. Even then, how does one define a "successful physician", especially when his role is continually changing, let alone measure it? The analysis, ultimately, must be as subjective as it is objective.

Advanced standing admission is valuable in that it increases the short range output of physicians and brings into medicine people with graduate training in other fields. Its major disadvantage is that it is, in the long run, an expensive and inefficient method of providing physicians. The future should see a fixed ratio of students of this type being admitted, the ratio being changed according to social and professional needs, but not according to the number or quality of applicants. Better health personnel will probably complicate the problem by asking for advanced standard based on experience. The best course here would be that used in the Soviet Union, where special preference is given to allied health personnel who have demonstrated the quality of their work, but receive no credit for previous course work, as it was not taken in medical school[17].

Quality control of one kind or another is necessary in any profession which allows its members to deal with the public without supervision. Evaluation methods at Toronto are under continuous review. In the next few years we should see an increased use of subjective clinical and oral examination assessment, with some continuation of written examination assessment. Both these methods are far from ideal, but the ideal method probably doesn't exist. Increased use of self-evaluation tests will undoubtedly be used with perhaps subjective evaluation of smaller groups of students. The basic assumption is that the school starts with a quality individual who has the intellectual capacity to pass. Emotional and physical problems are the usual cause of failure. Attention must be given to students with these problems to help them through their difficult times.

ORGANIZATION OF THE FACULTY OF MEDICINE AND ACADEMIC HEALTH CENTRE

Faculty Problems

The last twenty-five years has seen the small medical school burgeon into a large, complex, multi-faceted entity more aptly renamed an Academic Health Centre. The large number of staff, students, professions, subprofessionals, non-academic employees, faculties, professional bodies, and academic programs involved in the academic health centre give it a unique position within the university. It must also relate to the governing boards of hospitals, has service responsibilities towards the community, is concerned with research, and must deal with complicated health problems of society. Its budget is derived from many sources, and in the last eight years at Toronto has increased from just over two million dollars annually to twenty-five million dollars[27]. "Thus, the medical centre represents an entity that in function and composition is far more heterogeneous than any other component of the university or most industries[28]. However, "the growth of the academic health centre has not been accompanied by evolution of organizational structure and administrative process appropriate to the scale of complexity of its operation[29]. This has led to complex unsolved problems between the academic health centre and the university, hospitals, faculty, students and community and generally has limited its effectiveness in responding to changing social needs. As J. W. Gardner stated, "Complexity seems to be the universal condition, organization the universal requirement"[30]. Several critical problems will have to be effectively managed if the University of Toronto Academic Health Centres are to perform their function as undergraduate medical education institutions.

"As our technological and biomedical knowledge have increased, our educational programs have focused more and more on the complexities of catastrophic illness. Our medicine has thus become increasingly hospital based and physicians have become progressively unfamiliar with the total or actual health needs of our population"[31]. Today's students have little contact with the large majority of suburban and rural practices most of them will eventually join. "And in the hospital the student sees the failures, not the successes, of primary care"[40]. The Academic Health Centre must provide settings in which a perspective of the total health care system can be gained. Consequently, the share of attention and total resources which the acute care hospital now commands will be reduced in the future"[29]. As Mr. Martin, the Deputy Minister of Health has said, "We will have to loosen the grip of the teaching hospitals to open up use of other facilities".

The second problem concerns what Dr. John Evans has succintly expressed as "national conformity and local irrelevance"[29]. It is the problem which our medical school faces when it attempts to function with the same objectives as other medical schools, instead of devising its own solutions to its own problems utilizing its own resources. Attempts at reworking other centres' ideas and idealizing other institutions' goals will preclude our being a significant contributor to Canadian health care and education.

The large, complex nature of the academic health centre has resulted in a multitude of institutions, departments, and isolated hospital and research groups. Consequently, "the objectives of the academic health centre have tended to be subordinated to the aspirations of individuals and to the goals of administrative sub-units. This frequently results in wasteful competition, and imposes serious limitations on the pursuit of goals which can only be achieved through broadly based effort throughout the health centre"[28]. The lack of a coordinated approach to mutual faculty/hospital objectives has been a major stumbling block to the orderly development of the teaching hospital-based part of the medical education program[32]. It is evident that a more coordinated approach is needed.

"Because of the increasing complexity of the academic health centre, the allegiance of faculty members has turned to the department and/or teaching hospitals, leaving the medical faculty a loose confederation of autonomous departments. The rapidly expanding educational, research and service programs has placed greater responsibility in the office of the medical dean, while departmental and individual autonomy has progressively and increasingly eroded his ability to administer effectively"[28]. This has resulted in a lack of effective control of budget and essential resources such as personnel, space, and services. The teaching staff has difficulty in identifying lines of communication and decision making at the medical school, and the university has difficulty exercising control over its teaching staff. Better mechanisms to define and manage the functions of its full time teachers and to control the clinical practice and disposition of income are key factors in improving the management of the academic health centre. The role of the Dean as primarily an integrator and controller of the total health care effort in the academic centre must be clearly defined.

"The size of the Faculty even at present creates special challenges for adequate preservation of quality control, of patient care, education and research provided by the faculty for its clinical departments"[32]. In addition, impersonal teaching programs and faculty who are unknown to most of their colleagues present problems. Yet the increasing demands by Canadian students for admission to medical schools and the Mustard Report suggest that an increase in size is probably imminent. However, immigration policy, social demands and needs, government fiscal policy, desirability of medicine as a career relative to other professions, use of paramedical personnel, and the geographical distribution of physicians all have important bearing on the number of students which should be trained. Some recent reports suggest we may even face a surplus of physicians in the next ten years[33]. This large number of variables dictates a flexible approach to changing the enrolment. Dr. Steiner has devised several methods of increasing the size of the school, and these are presently being studied by the Long Range Planning and Assessment Committee.

A major problem in the past has been that precise educational objectives for each area of the curriculum have not been developed. With much more diffuse educational program in the future, well-defined objectives are essential in order to define programs. However, several academic health centres would present an excellent opportunity to experiment with different educational objectives.

Future Constraints on the Academic Health Centre

Undoubtedly the major constraint placed upon any change of structure will be by government, and these will largely be through its financial control of hospitals, universities and other academic health centre resources. Government will assert planning responsibility for the overall pattern of health services, and for a health service manpower policy[3]. The Government of Ontario is prepared and indeed wants to receive advice from the Faculty of other knowledgeable bodies in making these decisions. It seems against the present government's philosophy to force change, waiting for the medical profession to come forth with ideas. However, in the past, we have been incredibly lax in meeting this responsibility. The result has been that some government plans have proceeded with good intention but insufficient expertise, with both the medical profession and the public suffering as a result. It is evident we need aggressive leadership to meet this need of government for informed and rational advice. Medical education, *per se*, will probably be controlled by government only insofar as its programs overlap with broader government objectives.

A second major area of difficulty may well come from the public. "Medical education is now regarded by society as a means to an end, defined more by social and public utility than by academic and intellectual criteria"[34]. "The fundamental intellectual independence and research characteristics of the education system must be respected"[3], while "teaching services must satisfy public demands for personalized care and at the same time provide an appropriate setting for clinical education of high quality"[28].

The Faculty may have a few minor problems with the university and with paramedical professionals, but these should be easily solved.

Organization of the Academic Health Centre

It would be impossible for the Faculty of Medicine as it is presently organized to provide the type of education needed by the doctors of the future, since it does not have the necessary clinical or community resources. Numerous methods to restructure the Faculty have been proposed, but the one which has received the most attention is the "common basic science with semi-autonomous clinical colleges" model. This would involve the Faculty providing the basic science program primarily at the Medical Sciences Building, with clinical training occurring in three or four clinical colleges. A "clinical college" would consist of two or three teaching hospitals joined in an administrative and functional unit for medical teaching. A preferred, and more comprehensive term, is Academic Health Centre. As described earlier, this would include several teaching hospitals, the Faculty of Medicine, peripheral hospitals, community clinics, individual practitioners, and all the other health resources of the community. It would include not only teaching functions, but research and service functions. At Toronto, the Faculty of Medicine would be part of three or four different Academic Health Centres. Exactly which hospitals and other resources would comprise each Centre is yet to be decided.

The principal objectives of the development of the semi-autonomous Centres would be several: One, the Centres will facilitate the planning and delivery of health care, research and medical education through the concept of health care regions, much the same as in Sweden or the Soviet Union. They would be semi-autonomous in that the Faculty would have responsibility for overall direction, coordination, integration of programs, global budgeting, and external relations of the Faculty, but would allow local autonomy within these guidelines. Major administrative problems with this type of system have yet to be solved, but considerable progress is being made by the Long Range Planning and Assessment Committee towards determining exactly what "semi-autonomous" means. Two, some central direction will prevent fragmentation of the resources of the Faculty as a whole, and ensure uniformly high standards. It would also ensure a central ability to influence the complexes so that the overall faculty objectives can be achieved. Three, several Centres provide an excellent opportunity to experiment with different methods of health delivery and education without risking all of the resources in the system on any one experiment. Four, research coordination would be initiated. Five, the Academic Health Centre would be small enough to allow more personal identification with the Centre and with its objectives[32]. Six, the present clinical and paramedical resources of the Faculty would be greatly expanded. Seven, the Centres would provide a base for the proposed provincial regions of health.

Basic to the concept of Academic Health Centres is the fact that all health professionals cannot be educated and trained in our urban, major academic centres. The Academic Health Centre, although associated with the Faculty, would make full use of its community resources and "satellite education centres"[24]. Such programs would encourage students to stay in smaller towns, show them ambulatory care practice, assist in recruiting rural students into medicine, and enrich the educational quality of life in many rural communities[2]. These programs would complement rather than duplicate existing programs. "Care must be taken to avoid altering community health centres used as learning setting more than absolutely necessary from the usual service orientation. Otherwise, the student learns 'ideal' patterns of health care provision which are not duplicate in the real service setting"[3].

Implications of the Academic Health Centres

The implementation of the Centres will provide a good opportunity for a review of the structure of the Faculty of Medicine, resulting in recommendations regarding the most effective long range organization. This should effect better defined lines of responsibility, authority and communications, and result in better relations with the university community, hospitals and government[32].

The reorganization of the Faculty will result in a shift in the balance of power, probably more going to the Dean and to the Centres, with the departmental chairmen losing authority. This is necessary, as critical decisions will be necessary with respect to overall faculty integration and program direction, not in individual departments. Exactly how the Dean, representing the Faculty centrally, and the Centre will distribute their authority is a subject of great controversy at the moment. Some form of central global budgeting and resource allocation with local autonomy is the most likely solution. However "setting and working towards objectives must be reaffirmed as the primary and essential instrument of administration. This instrument can only be effective if the statement of institutional objectives which is normally open to an infinite variety of individual interpretations is transformed into an operational template from which consistent guidelines for selecting priorities and allocating resources can be transmitted to all those affected. To do this, one must state goals in objective terms and have a reasonable level of acceptance by those administered[29]. It is evident the proposed decentralization will require strong leadership and major increases in administrative support.

It will be important for the Faculty to renew its close ties with the university community. Dr. D. Bell has said, "The university will become the central institution of the next one hundred years, because of its role as a new source of innovation and knowledge"[29]. If the Faculty of Medicine is to participate as a leader in health care, it will require the university resources. Not to lead would be to abrogate its social responsibility.

In implementing this plan it will be necessary for the Faculty and Government to jointly establish a control mechanism to ensure that resources are used effectively.

Increased staff and, in some cases, facilities will be required, but should result in a long range saving through greatly improving community health care delivery. It should also result in a greatly increased student enrolment capacity. Where clerks and interns are competing for clinical material, it would be best for clerks to be retained in core hospitals and for interns to be placed in peripheral hospitals but still under the aegis of the educational program[13].

The trend is for downtown teaching hospitals to have a reduced utilization population, and therefore needing a reduced number of beds, but to deal with more specialized diseases because of their consultancy functions. This trend will accelerate with the advent of this new type of health care system. This will result in the major referral hospitals becoming less suitable for family practitioner teaching. If at the same time the number of residents in specialty programs is drastically reduced, the quality of education and service will deteriorate. This problem can and should be avoided by careful planning.

Specialty resources such as the Hospital For Sick Children, the Princess Margaret Hospital, and the Clarke Institute of Psychiatry should be available to all of the Academic Health Centres. Dr. John Evans feels that this principle should be extended to all resources in the Faculty, so that the Academic Health Centres in essence are only planning and executing bodies with access to all Faculty resources subject to central coordination. He feels that this gives the system more flexibility, but this may be too flexible for a Faculty as large as Toronto's.

Students at all levels in the Faculty have legitimate concerns about the functioning of the Academic Health Centre of which they are a part, particularly in areas directly related to education. It is important we take advantage of our student representation on faculty committees to present our points of view.

CONCLUSION

A comprehensive health care system is required to meet the changing needs of society. If it is to be successful, physicians must play a key role in the development of this system, and their ability to do so will depend in large measure on their undergraduate education. The present curriculum must be modified to allow more emphasis on ambulatory care and the social aspects of health care, and at the same time not sacrificing basic science. This will necessitate partial undergraduate specialization, with the appearance also of a new type of physician — the health care system specialist. Technological and learning process advances will revolutionize present teaching methods. These changes can only occur in a reorganized Faculty of Medicine. Semi-autonomous Academic Health Centres working within a health care region, yet associated with the Faculty, will require Academic Health Centre and Faculty authority, responsibilities, and objectives must be clearly defined, yet the whole system must be flexible to adapt to changing demands. These changes will require only moderate increases in present physical resources, but vast measures of intellectual effort, good judgement, patience, cooperation and goodwill among all those concerned with trying to provide the best possible health care for our society.

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Programmed Self-Instruction and Individualized Learning

Robert S. Davies

INTRODUCTION

Consider the problems inherent in the lecture system of medical education. For the instructor these include the following:

i) Does a question from an enquiring student represent the understanding of a cross-section of the class?

ii) Can he take time to answer the question when there is a lot of material to cover in the lecture and/or most other students already understand the problem?

iii) If there are no questions can the instructor assume that there is one hundred percent comprehension by one hundred percent of the students?

For the student there is one problem. He has no opportunity during the lecture to evaluate his own absorption of the material presented. He can only do this when he reviews his notes.

Clearly the lecture system cannot accommodate the special requirements of individual learning. By definition, a mass lecture is directed only to those students lying within one standard deviation of the mean . . . *in all respects!* The lecturer must aim his rate of presentation and level of presentation at the average student. We might well question the efficiency of the lecture system.

Nobody seriously considers the mass lecture system an institutional panacea, although some of us have reasons for enjoying such an activity. In a survey reported in the Auricle, November 1972, 52% of 848 medical students at the University of Toronto rated six different styles of instruction. The following summary was made.

TEACHING METHODS

Students were asked to evaluate different methods of instruction they have received. The following results were obtained.

METHOD	*% rating "Excellent" or "Good"*
One-to-one contact	76
Didactic seminars	56
Whole class lectures	53
Seminar laboratories	47
Self-Instruction (books, tape-slide presentations, etc.)	42
Laboratories	29

It is worth noting that all methods of teaching except laboratories were rated superior to self-instruction. This may reflect the need for guidance in earlier years due to the vast amount of information which must be organized, or else a failure of the system to encourage student initiative.

That "self-instruction" was rated second from last is indeed curious, although for reasons different from those articulated above. Certainly anyone would anticipate that teaching done on a one-to-one basis would gain most favour from the students. Why then was "self-instruction" so poorly rated when this method is supposed to simulate exactly and in certain aspects be superior to one-to-one teaching?

SELF-INSTRUCTION

In a classic sense, self-instruction enables an individual to select an area of interest that he can learn under conditions of his own choosing. In a practical sense it would involve a student selecting a topic of interest to him at a particular moment and having instant access to educational resources that would permit him to learn. This process is applied in lower grades of elementary education (free schools, open plan, etc.). Applied to medical education, the format adapted by McMaster University comes closest. Here the traditional lecture format has been totally abandoned. Even at McMaster, however, the concept of classic self-instruction has fallen short.

I said before that self-instruction simulates the concept of one-to-one instruction. Suppose we could imagine an assignment of one tutor to each and every medical student at the University of Toronto, even if our medical school were expanded to three-hundred and fifty students.

Both the student and his tutor will know precisely how effective the instruction is. The instant the student should fail to grasp a point, he will indicate so to his tutor; or the tutor will continually ask if the student understands each step as it is being explained. Thus a student can constantly evaluate his progress. As well there is ample room for review and repetition of instruction if necessary.

All instruction in the one-to-one method is individually based in this manner. The student chooses the time and place to execute his learning. He then proceeds to learn at the precise pace that suits him, no faster and no slower. When he wants a break, he takes it. If he wishes to ask a question, he won't be embarrassed, neither will he feel that he is taking up someone else's time. As soon as he grasps a concept he'll go on to the next, then the next and so on. Compare this system with the Daedogogue of ancient Rome or the outchitel' of Russia.

The one-to-one relationship can be extended to self-instruction whereby the student, given appropriate resource material, can attempt to learn on his own. Whenever he encounters difficulty either in actual learning or in finding answers to extraneous or esoteric con-

siderations, he can resort to his tutor. Here, the style of learning is more of an active discovery for the student. Rather than passively receiving somewhat didactic instruction, the student is challenged to learn on his own as far as possible. The tutor will be used as a resource person and as an examiner ("O.K. Let's see what you learned last week.") as well as an 'educational manager' directing and guiding the student. He will also supply external motivation whenever it is needed.

Students being what they are, will never fail to get off on some tangent. They are curious and very excitable persons*. Given the ideal conditions of self-instruction described, it is evident that the student will demand more of his tutor's time to discuss all sorts of issues he encountered on his own, than of the time required of the tutor to deliver his didactic instruction. To an enquiring mind, answers only generate questions**.

TEACHING VS. LEARNING

Up to this point, I have attempted to relate and interweave the two teaching methods, that is, one-to-one contact and self-instruction. The failing of this relationship arose when self-instruction was described in an Utopian setting. It is, at this point, however, that a reasonable transition can be made to realities. I will attempt to show how self-instruction (ranked fifth by University of Toronto medical students) can be made superior to the one-to-one contact method (ranked first).

The reasons for voting for one-to-one contact as a favourite are self-evident. What is not so obvious from the survey, and what were incorrectly surmised, are the reasons for the poor showing of self-instruction. In fact no University of Toronto student, medical or otherwise, has been exposed to this type of educational activity — not at the University. This is an assumption, but I am convinced that where the questionnaire alluded to "self-instruction", it did not refer to the type wherein a man, using his own immediate resources exclusively, learned a total discipline.

In fact, what the questionnaire alluded to was not learning in any sense. It was teaching. This is not pedantics. The two terms mean totally different things requiring totally separate sets of activities, sometimes mutually exclusive. I maintain that a book can teach, a tape-slide can teach, and so can a film, video-tape or audio-cassette; but what evidence do these media exhibit that learning can ever be achieved. This is the same question that we must ask of our lecturer. He can teach two-hundred medical students in a one hour lecture, but will they learn? How many will learn? How do you know? How do they know?

*In fact traditional contemporary education tries its best to stifle this innate curiosity. Compare the eagerness of a nursery school child to a high school student.

**In essence this was B. F. Skinner's reply to the teacher who felt endangered by technology. "Any teacher who can be replaced by a machine should be".

Some might answer that the mass lecture is not intended to impart learning, but that it is to function as a preview or review, and that the student must learn on his own time. Not many lecturers insist that students lay down their pens, because they will be given a detailed handout of all relevant material and because the lecture will only serve to introduce and overview the topic. One might ask also, how many, having said this then say that if you don't feel like attending the lecture right now, come back at the next hour at which time the lecture will be repeated? And finally one might ask how many lecturers pretest students and when they discover an adequate knowledge of the material, give an automatic Honours and say, "Don't bother with this topic"?

TECHNOLOGY

McMaster University has a medical school that operates without lectures. Instead, most didactic instruction has been transferred to electronic media, notably tape-slides, films and video-tapes. All materials are available to the students in a self-instruction laboratory that is open twenty-four hours per day. The faculty-student ratio is enviable. It permits the assignment of a few students to one tutor, who does indeed guide and manage the student throughout his undergraduate program. Where the concept does fall short however — and this was admitted to me by students in the program — is in what the University of Toronto questionnaire refers to as self-instruction. In reality, what has been transferred to tape-slides are didactic lectures that have lost a sense of reality and that at no time in the conception or production stages were geared to the individual learner.

The materials are available twenty-four hours a day to teach, but learning from them is next to impossible. Technology at McMaster appears to have offered the medical students very little.

The fault lies not in the technology but in its use. We must at some point realize that unless total consideration is given to the learner rather than the teacher, our technology will always be abused. We will always refer to our media departments as multi-million dollar white elephants, until we have learned to program learner requirements. Did I say 'program'?

PROGRAMMED SELF-INSTRUCTION

This is undoubtedly the one area in which McMaster's failing is manifest. *Programmed instruction* is a term used to describe the process of breaking down and sequencing instruction into small steps whereby the student, on his own (individual instruction) learns a skill, concept, principle or whatever by building on its component parts. Throughout the instructional sequence, the student is constantly monitoring his own progress.

While programmed self-instruction can be achieved through one-to-one personal contact, it is more commonly associated with the type of facility that Mc-

(Continued on inside back cover)

Women in Medicine

Joe Blankier, B.Sc., 7T3

With the advent of women seeking their equality in society, there has been some focusing upon the role of women in the predominantly male professions such as medicine. Women's concern over their roles in the professions is not new and one might consult the medical history books for a fuller understanding of where women stand today and why. There are many examples of frustration, rejection and slavish work to gain acceptance to a profession where the dominant feeling was that,

"No girl . . . who has been brought up in the sphere in which persons of refinement are to be found could dissect the different parts of a human body or listen to anatomical and physiological lectures in the presence of a number of young men without outrage to the delicacy and sense of both sexes"[1].

Although mores and motives have both undergone considerable transformation since 1870, it is the texture rather than the actual content of this passage which warrants attention. It reflects an arrogance and sexual hierarchy to which there is absolutely no compromise.

Mary Carns Wilson, in her short review on medical education of women[2] relates the incident of Miss Sophia Jex-Blake, who with four female compatriots was literally mobbed and pelted by male students as they proceeded to write their examinations. The unjust legal case which ensued against these women was calculated to prevent them from obtaining their degrees at Edinburgh despite their high standings. It did succeed and forced them to obtain their degrees from Berne.

Nevertheless, some stout-hearted women did prevail. Emily Stawe, the first woman practitioner in Canada was initially turned away from the University of Toronto Medical School with such phrases as,

"The doors of this University are not open to women and we trust they never will be".

Her resourcefulness and that of others like her was not to be underestimated. The establishment of the Women's Medical College (later the Ontario Medical College for Women) guaranteed that at least some women would have the opportunity to become physicians. By 1895, this school was attended by forty students. But even after the Varsity Medical School began to officially enroll women in 1905, the struggle against prejudice in Toronto hospitals remained an uphill one for many years.

And now, overt discrimination does not exist in most medical schools in Canada and the United States. A victory for justice — or is it? The fact remains that only about 7% of physicians are female (with 80 - 85% in active practice). One obvious explanation for such a low figure is the time lag involved. The end to discrimination on a sexist basis is a comparatively new phenomenon and no doubt the proportion of female physicians will steadily increase to 15 - 20% within a few years. However, it is still instructive to look at the attitudes of medical schools and the profession at large to see if more subtle forms of discrimination exist.

A recent study[3] of medical schools in Canada and the United States has revealed some interesting attitudes of medical educators. Although most schools have an official policy accepting candidates only on the basis of merit, some remain quietly prejudiced against women, especially those women with children. If a student becomes pregnant during her training, schools are generally flexible as long as she is absent for only a short time. There is little or no provision made for a postpartum recovery period and consequently most new student-mothers return to training after three days to two weeks. No doubt the fear of loss of academic credit hangs heavily in their minds. It is of no consequence whether the woman is in an undergraduate or postgraduate programme. A similar situation exists in both spheres.

In comparison with this situation, let us look at two countries where the percentage of female medical students and practitioners is higher. In the Soviet Union (65% women physicians) the policy of the Department of Health is that:

". . . The women in the U.S.S.R., including physician, mother, and also women medical students have the right to have a paid leave for pregnancy and delivery — 56 days before delivery and 56 days after delivery. And in case of complications during delivery, 72 days after. The students preserve their scholastic standing during this period and proceed with their studies as if they had missed no time. Women having a child until it is of one year of age, may not have night-duty and women doctors or women medical students are not required to serve night duty in hospitals. Working physicians and medical students have first preference in placing their children in nurseries and kindergartens"[4].

In Sweden, which has a medical insurance scheme similar to that in Canada, there is a somewhat more progressive policy concerning pregnant women doctors:

"As all other pregnant women in Sweden, pregnant women physicians have the possibility of taking 6 months' leave from their work around and after the delivery. During these months they receive the same daily allowances from the National insurance funds as all people receive when they are ill. At the universities, there are day nurseries for the children for all students at the university, including the medical faculties. In some hospitals there are joint day nurseries for children of all women working in the hospitals: doctors, nurses and auxiliary personnel. They are flexibly treated as to schedules"[5].

So it seems that there are possibilities which the med-

ical profession in Canada has yet to explore as regards female physicians.

Even before university, the prospective woman student will often encounter obstacles. The belief that medical education is too long and too difficult; the impression that women are not wanted in medical school; the inflexibility of medical education, especially during internship and residency and the fear of encountering an anti-feminine attitude are all very potent deterrents. Claire V. Wolfe recalls that,

> ". . . as far back as in high school, how people would say: 'Oh, you don't want to be a doctor?' That's no life for a woman. How could you possibly have time for a family and a career in medicine? . . . How can you justify taking the place of a man who would probably practise continuously from the time of graduation?"[6]

One can easily see how these pressures, some subtle, can be exerted by friends, family and guidance counsellors upon suitable and interested women and thereby considerably reduce the number of female applicants.

Women find further difficulties once they complete their training. The argument very quickly arises that since the community needs physicians and since the training of physicians represents a considerable expenditure from the public purse, the community deserves a reasonable return on its investment. To add fuel to the fire, Dykman and Stalnaker[7] showed that 38% of the 17,000 women doctors in the U.S. had to curtail their professional careers for an average of four years because of pregnancy and family problems. This is equivalent to 25,440 years of practice or approximately the number of person-hours that the graduates of 25 new average-sized medical schools would practice in ten years.

With these facts in mind one can see why the question of divided loyalties is a thorny one to the woman doctor and the community. Furthermore it has been shown[8] that:

a) The large majority of women physicians will marry within four years of graduation and usually before the age of thirty.

b) They will have at least one child, usually within four years of marriage and

c) Marriage with or without children leads to some withdrawal from professional activity and child-bearing leads to even further withdrawal.

However, there is reason to believe that at least in Canada this trend is beginning to reverse. Table 1, based on information gathered by Eva MacDonald, reveals that the more recent the graduates the greater the percentage remaining active in medical practice.

TABLE 1

Years of Graduation (1)	% Full Time	% Part Time	% In Training	[illegible]
1930-39	60	8	—	68
1940-49	68	7	—	75
1950-59	71	8	7%	86
1960-64	Still in at time of survey			

(1) % of total women graduates

Regardless of these trends one cannot attribute withdrawal from practice to unwillingness to work, nor can one attribute it to husbands' disapproval of their wives working. Instead, other very real factors play a part — the difficulty of finding adequate domestic services, the lack of available part-time* work and the feeling of inadequacy after even a short hiatus from active medicine. These problems are a constant source of frustration to woman physicians whose situation forces them to compromise, albeit temporarily one hopes, their professional aspirations.

The socialization of female children is a very important factor in the development of behaviour and attitudes. The fact that girls are taught that they grow up to become nurses, teachers, secretaries and of course mothers; while boys are taught that they grow up to be doctors, lawyers and businessmen is of considerable significance. Combine this latent attitude with reinforcement throughout high school that medicine is not a career for women and you have a basis for the relatively low number of female applicants to medical school. Although women are gradually throwing off this form of psychological exploitation a general reevaluation of peoples' attitudes and a reeducation of society are necessary. Appropriate counselling can be of great benefit here. Woman doctors in general and especially groups such as the Federation of Medical Women of Canada can assist in making information available and also provide members to discuss the present and future aspects of medicine with female high school students. In 1967 the President of the F.M.W.C. in her annual message said:

> ". . . there is still discrimination, and I feel very strongly that there are certain things that women can do for other women that men's organizations cannot do"[10].

Perhaps these "certain things" can be extended toward assisting female students aspiring to medicine.

During undergraduate training little difficulty or overt prejudice is encountered. Fewer women students marry during this period and even fewer are having children. However, for those few (few enough to be handled on an individual basis) some flexibility in the curriculum should be entertained. Surely the provision of sufficient ante- and post-partum leave with arrangements for re-

*"Part time" means anything from half days to full days without evenings and weekends.

medial work during the summer months should be instituted.

But how to resolve the dilemma of post-graduate training requires greater consideration. In the past women have tended to enter specialties such as anaesthesia, dermatology, radiology, rehabilitation medicine and public health. These areas by their nature are more flexible in their training and less time consuming in their practice than some of the medical and surgical specialties and sub-specialties. One wonders how many women have been drawn to them simply as a matter of expediency. Cognizance of the "double duty" a married woman doctor with children faces may be one explanation for their reluctance to enter those specialties requiring a large commitment of time.

A possible remedy or at least an amelioration of this dilemma is the one adopted by the Department of Psychiatry, New York Medical College. Their programme, an effort to resolve the division of home and hospital duties consists of an extended training period. The total length of training is not shortened. However, consideration is given for women to spend more time with their children. Special provision is also made when family responsibility warrants it. Night and weekend duty is also appropriately modified for the mother-resident[11]. Other specialties, but not all, are amenable to such a modified programme. Certainly if the demand warrants it, investigation into the feasibility of such a programme should be initiated. The present situation deserves close scrutiny if we are to decrease the number of doctor "drop-outs". Modification of internship and residency training should be sought to curtail the premature retirement of women doctors because of the problems in combining a professional career and child raising.

For the woman in general practice, group practice, community clinics and family practice units provide a viable way of dividing responsibilities for night and weekend coverage as well as allowing greater flexibility for time away from work. Accommodation for the part-time woman doctor can also be facilitated in such a setting. Even a hospital emergency department could be staffed by several well-trained part-time women doctors in a casualty-officer role.

But even these part-time physicians require some form of child care when they are at work. The provision of this amenity has been a considerable obstacle to professional women. An adequate source of reliable domestic help is singularly lacking. Furthermore, until this year no financial incentive (in the form of a tax deduction) was available to make such help economically worthwhile. Perhaps it is the community which should assist these doctor-mothers to resume their profession. The establishment of creches in hospitals for the use of women doctors and other professional groups such as nurses, physiotherapists, social workers, etc. is advocated by some. Others feel that these nurseries should be organized on a local level. But perhaps the best solution is the sharing of child raising between the two parents. The decision to share the duties of the home, including child care requires strong resolution from both parents. But this will permit both to have a professional as well as a home life. No doubt, a restructuring is required in male and female roles in society generally and in the home particularly. Perhaps their acceptance on other than a sexist basis, simply as people with a common interest, may be of considerable importance. This proposal with its multiple ramifications and implications is much better expressed and with greater insight in the current feminist literature.

The woman doctor, who has been away from practice for a time, faces another problem — refreshing her skills and rebuilding her confidence. For this problem refresher courses are required to update the woman physician with advances in technique which may have been introduced during her absence. Nevertheless, women who do withdraw for a few years should be encouraged to retain their professional associations, read journals and even arrange to visit local hospitals to participate in rounds and conferences. These efforts will greatly assist their readjustment to active professional life.

The ultimate responsibility for these actions, however, rests with women and woman physicians. This is not to say that the rest of the profession or the community should not play a role! It is the community and the profession who will suffer the most if we eannot train the best available talent or if we do not take advantage of already trained talent. No profession is justified in wasting potential and mere chauvinistic tokenism is no solution at all. But it would be a major credit to the medical profession to take the lead in fully utilizing the talents of women.

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The Role of Government in the Evolution of the Canadian Health Care System

Paul Finnegan '73

The evolution of government involvement in the Canadian health care system has a rich history which dates back to the time of Confederation. The hospital insurance legislation which was developed in the 1950's and the medical insurance legislation which followed in the next decade were the result of many years of activity in the health care field on the part of municipal, provincial and federal governments. The current crisis of cost within the health care system is, in turn, a consequence of the federal-provincial legislation pertaining to the sharing of costs related to these insurance plans.

The Federal and Provincial Governments are at present negotiating the details of new legislation which may result in the correction of some of the ills within the existing system. The new legislation will change the structure of Canadian health care by encouraging the Provinces to develop innovative approaches to the problem of health care delivery and will hopefully result in eventual control of the total cost of providing care by limiting the health funds available for provincial spending.

In what follows we will review the history of health insurance in Canada, detail the development and implications of our national hospital and medical insurance legislation, discuss the new health spending legislation which has been proposed by Ottawa, and consider some aspects of the future of the health care system in the Province of Ontario.

THE EARLY HISTORY OF HEALTH INSURANCE

The British North America Act of 1867 specified the constitutional division of legislative jurisdiction between the Federal and Provincial Governments. Although the act contained few provisions pertaining to health matters it assigned responsibilities in this field to the two levels of government in a manner which reflected both the federal spirit of Confederation and the state of development of the existing health care system.

In the early 1900's the municipality served as the basic functional unit in health care planning and administration while the provinces provided financial aid, advice and technical assistance.

The health insurance field developed during the 1920's and '30's as a number of commercial companies marketed limited hospital and medical indemnity plans which provided payment to the insured for a part of the cost of his health care. During the late 1930's a number of professionally sponsored, non-profit, prepaid medical plans were introduced in various parts of the country. One such plan, the Physicians' Services Incorporated was developed in Ontario in 1947. This and the other plans all attempted to provide complete or nearly complete coverage within the terms of the particular contract and with certain exceptions did not involve the patient in payment of the fee for services rendered to him.

As private and provincial health insurance schemes developed in many parts of the country, Ottawa expressed its interest in this field by establishing an Advisory Committee on Health Insurance (1942). At the Dominion-Provincial Conference on Reconstruction in 1945 the Federal Government presented a series of proposals for a national health scheme based to a considerable extent on the work of this Advisory Committee. The proposals offered financial assistance to the Provincial Governments for the operation of a comprehensive health insurance program which was to be nation-wide in scope and introduced in progressive steps. The proposals were not accepted by the Provinces.

Following the Second World War, with the nation's hospitals being drastically short of equipment, supplies and personnel, the Federal Government introduced a National Health Program (1948) which provided a series of grants to the Provinces for the purposes of strengthening traditional public health services, aiding in hospital construction and the purchasing of equipment, facilitating the training of professional personnel and conducting surveys of health services and resources. The then Prime Minister described these grants as "a fundamental prerequisite to a nation-wide system of health insurance" and with these words definitively pronounced the intent of the Federal Government to enter the health insurance field.

THE NATIONAL HOSPITAL INSURANCE SCHEME

By the mid 1950's provincially sponsored hospital insurance plans were in operation in four provinces in addition to the private voluntary insurance schemes which had developed through the country. By 1957 about 40 per cent of the Canadian population was covered by hospital insurance while about one third was covered for surgical and medical benefits.

The Hospital Insurance and Diagnostic Services Act was introduced in the House on March 25th, 1957, and on July 1st, 1958, the Federal-Provincial hospital insurance plan became operational. British Columbia, Alberta, Saskatchewan, Manitoba and Newfoundland were in the plan from the beginning; Ontario, Nova Scotia, New Brunswick and Prince Edward Island joined in 1959. The Yukon and the Northwest Territories entered in 1960 and Quebec, the last to join, did so in 1961.

The Act specifies a comprehensive range of in-patient services from the cost of meals to the cost of radiotherapy and then goes on to define outpatient services

as those in-patient services which are provided to out-patients as specified in an agreement with a particular province. Each province, then, retained the option of providing out-patient services and Ottawa agreed to share in the cost of providing these services.

The Provinces, in order to comply with the terms of the Act, had to make provisions for the furnishing by hospitals of insured services and for the payment to the hospitals for services provided. The Act committed the participating Provinces to ensuring that insured services be available to all residents on uniform terms and conditions. Further, each province was to ensure the maintenance of adequate standards, records and accounts within its hospital.

The Federal Government agreed to share, on a formula basis, the cost of services provided by the provincial hospital systems (sanitarium, mental health institutions and nursing homes were specifically excluded from the cost-sharing arrangements).

Consider some of the consequences of the Hospital Insurance and Diagnostic Services Act:

1. At the personal level the Act assured each and every Canadian ready access to a good basic standard of hospital care and related services, free from the crippling bills incurred as the result of illness requiring hospitalization.
2. At the community level the Act promoted the development of local hospitals to serve the health needs of the resident population. These hospitals became a significant economic force within the communities and were not without considerable prestige value to the towns in which they were built.
3. To existing hospitals the Act meant a source of financial security and eased their longstanding burden of raising operating expenses from local and provincial sources. It also encouraged the basic standardization of hospital services and assured a basic quality of care.
4. To the Provinces the Act meant a tremendous financial assist in the development of community hospital facilities.
5. To the Federal Government the Act was a practical confirmation of its concern for the health care needs of all Canada.
6. Since the insurance program recognized for cost-sharing purposes only specified hospital based services it encouraged the development and use of these expensive services and discouraged the development of alternate methods for the delivery of care which might have reduced overall costs.
7. The cost-sharing formula was such that there was little incentive for the Provinces to cut the cost of the services they provided for to do so would have been to cut down the inflow of federal funds.

Economically, the overall effect of the Act was to increase the use of expensive hospital based medical services and to escalate the cost of providing these services, while discouraging the use and development of cheaper modalities of service delivery. Of course, as people became aware of the availability of these services more use was made of them. Further, as people became more aware of the benefits of the hospital insurance scheme they began to think about medical insurance. The private insurance companies who had been essentially driven out of the hospital insurance field by government were cognisant of an increasing public interest in medical insurance and consequently began to expand their activities in this field.

THE MEDICAL CARE ACT

As far back as the early 1900's medical care insurance had been available under the municipal doctor program which was developed first in the Province of Saskatchewan. Commercial activity in the provision of medical insurance dates back to the 1920's and '30's and Provincial Government involvement dates back to the 1940's and the Health Insurance Act of Alberta and British Columbia (which were never put into operation). From the late 1940's there seems to have been a relatively quiescent period in Canada with respect to the further development of medical services insurance.

In 1963 the Government of Alberta initiated the Alberta Medical Plan in an attempt to facilitate the provision of medical insurance to those people in the Province as yet uninsured. The Alberta plan was basically a system of subsidized enrollment in both nonprofit and private insurance plans with firm government control over contracts, including setting maximum premium rates. The Provinces of Ontario and British Columbia were next to make available provincial plans for voluntary medical services to residents lacking such coverage. The Ontario and British Columbia plans were introduced in 1964 and 1965 respectively.

A major impetus to government involvement in the medical insurance field was the report of the Royal Commission on Health Services which was submitted to the Liberal Government in Ottawa in 1964. The Commission, under the chairmanship of Chief Justice E. M. Hall, had been established in 1961 and assigned "to enquire into and report upon the existing facilities and future need for health services for the people of Canada and the resources to provide such services and to recommend such measure consistent with the constitutional division of legislative powers in Canada as the commission believes will insure that the best possible care is available to all Canadians". The Hall Commission reported that while nearly 60 per cent of Canadians had some insurance protection against the cost of medical care, approximately 30 per cent of this was totally inadequate. Thus a central recommendation of the Commission's report was that the Federal Government enter

into agreements with the Provinces to provide grants to assist the Provinces to introduce and operate comprehensive, universal programs of health services insurance.

Prime Minister L. B. Pearson outlined a plan for national comprehensive medical insurance and described it as being "among the most important investments in the human resources of Canada that has ever been planned". The Medical Care Act was passed in 1966. In keeping with the recommendation of the Hall Commission the Act established a program whereby the Federal Government was empowered to make a financial contribution to those Provinces which operate medical care insurance plans meeting certain minimum criteria. The minimum criteria were as follows:

1. *Comprehensive coverage* must be provided for all medically required services rendered by a physician or surgeon. There would be no dollar limit or exclusion except on the grounds that the service was not medically required.
2. The plan must be *universally available* to all eligible residents on equal terms and conditions and must cover at least 95 per cent of the total eligible provincial population.
3. The plan must provide *portability of benefit coverage* when the insured was temporarily absent from the Province and when moving residence to another participating province.
4. The provincial medical care insurance plan must be *administered on a nonprofit basis by a public authority* that was accountable to the Provincial Government for its financial transactions.

The federal financial contributions to participating provinces were based on half of the national average per capita cost of the insured services of the national program, excluding administration, multiplied by the number of insured persons in each province. As in the Hospital and Diagnostic Services Act there was provision for a degree of equilization of payments between provinces. However, in the Medical Care Act the difference in per capita payments between the provinces was much less. The federal government's contribution to the provinces in respect to the cost of insured medical services were not limited by the terms of the Act.

Although the medical services insurance legislation which was developed by the provinces had to meet with federal approval, there was considerable variation in the legislation with respect to administration, range of services covered, and method of financing. Some provinces chose to have their medical plans administered through their Department of Health while others set up Medical Insurance Commissions to administer their plans. The less well financed provinces provided the basic medical services coverage required by Ottawa and the more prosperous province offered a wider range of other health services such as chiropractic and osteopathic services. The method of financing of the provincial plans varied as certain provinces utilized premium rates and general revenue while other provinces utilized general revenues and specific taxes. While the details of provincial differences in these respects is unimportant here, the point to be made is that the key to the successful participation of all provinces was the flexibility exercised by the Federal Government in its willingness to meet and recognize specific provincial situations.

What, then, were some of the consequences of the Medical Care Act?

1. In 1967, one year prior to the implementation of the Medical Care Act, the overall average coverage for medical services insurance in Canada was approximately 75 per cent. The Act ensured that medical services would be available to a very large number of Canadians who had previously done without, most specifically the poor and the infirm.
2. To many individuals the Act meant that they now had access to medical care which had previously been denied them through the deterent of cost. By removing the responsibility from the patient for payment of fee-for-service, access to care was opened up to such an extent that unmet need for service could now be accommodated within the medical care system; however, further spurious demand for service was concomitantly generated.
3. To the physician the Medical Care Act meant a guarantee of payment for almost all services rendered by him. This dramatically increased physicians' incomes but not without increasing the administrative cost of operating their practices.
4. To the Provinces with existing medical insurance plans the Act meant a good deal of financial support for very costly programs. To those Provinces without comprehensive medical insurance schemes the Act was an impetus for their development.
5. To the Federal Government the Act was yet another step in the direction which had been previously so clearly indicated toward a comprehensive national health insurance program.

The overall effect of the Medical Care Act has been to increase the accessibility of medical services within the country, to increase the demand for these services and to escalate the cost of providing them. Whether or not the people of Canada are "healthier" as a result is a moot point.

THE PROPOSED FEDERAL PROVINCIAL HEALTH COST-SHARING LEGISLATION

The cost of providing health services under the Hospital and Diagnostic Services Act and the Medical Care Act has risen in the past three complete fiscal years at a rate of about 13 per cent per annum. This rate of increase exceeds the growth rate of our gross national

product which has been roughly 7 per cent per annum during the same period of time. It was this inordinate increase in the cost of providing health care for Canadians which led the Government of Canada to consider and propose new health spending legislation.

A new plan for financing health care in Canada was proposed in 1970. Under this plan the present method of contribution by Ottawa by means of shared cost programs such as hospital insurance and medical care insurance would be discarded and replaced by a per capita central contribution. The per capita grant system was proposed in the Task Force Report on the Cost of Health Care in Canada which decreed the inflexibility in the present system which prevented the provinces from developing and using alternate services and facilities not covered under the existing cost-sharing legislation. The federal proposal required that existing levels of hospital and medical care be maintained but it allowed the provinces to decide individually where they wanted to spend their federally contributed health dollars.

The flexibility of health program development which the new proposals provide for the province is an attractive feature. However the new proposals entail putting an end to the open ended or "blank cheque" payments method currently in existence.

In December, 1971, at a second meeting of the Ministers of Health the Federal Government proposed a per capita payment system which would be based on costs incurred during the base year 1971-72, escalated by the gross national product rate of growth, and adjusted annually so that at the end of the five year period suggested for the program the per capita would be equal for all provinces. Ottawa also proposed to provide trust funds totalling $640,000,000 over a five year period which would be available to the provinces to finance the reorganization of the health care delivery system according to provincial priorities.

The presentation of these proposals was followed by a full year of active negotiations between Ottawa and the Provinces with respect to many of the details of the plan. 1972/73 has been proposed as the base year for cost calculations and the per capita grant system is to go into effect in 1974/75. The levelling of per capitas is now to be done on a ten year basis rather than on a five year basis as previously proposed. The amount of thrust funds available is unchanged but this money becomes available in 1973/74, and for the following five years.

The two levels of government are continuing their negotiations, the essence of these being that the Federal Government is pushing for rapid agreement with its proposals and the Provincial Governments are trying to force Ottawa to fatten the pot somewhat. Further, the provinces are demanding that Ottawa clarify its intentions with respect to the conditions to be attendent on the provinces in relation to receipt of the per capita grants. Ontario, for example, would like to receive more money from the federal treasury than is being offered at the present. Since Ontario offers many services to its residents which are not included in the existing cost-sharing arrangements, provincial officials have reasoned that the cost of providing these extra services should be included in the base year cost calculations. In addition, many provinces think that it is inappropriate to link increases in per capita contributions directly to the gross national product and have suggested that the increases should run 1 to 1.5 per cent above the gross national product increase.

The thrust fund which the Federal Government has proposed would be payable to the provinces over a six year period to assist in the reorganization and improvement of the provincial health care delivery system. Ottawa has made it quite clear that the thrust fund is not intended to shore up the existing health care system or to add to the overall volume of existing services. While having stated that it would be up to each province to determine the reforms which are the most promising according to its own particular situation, Ottawa has specifically listed home care programs, community health centers and the increased use of allied health personnel as examples of areas in which thrust fund money would be made available to the provinces. The provinces fear that the Federal Government would use the thrust fund inappropriately in as much as this money may only be made available for the development of programs which Ottawa thinks are suitable rather than leaving program development entirely up to the provinces. As an example of this, Ottawa might instruct Ontario that thrust fund money is available for the development of community health centers while Ontario might prefer not to develop community health centers but to spend the money on other programs. The point at issue is the degree of flexibility that Ottawa will demonstrate in allowing the provinces to establish their own priorities for health spending.

The new legislation, when enacted, will remove existing constraints on the development of the health care delivery system and will both allow and encourage the development of innovative approaches to the problem of service provision. Under existing legislation the provinces are forced to spend federal funds on hospital inpatient services (Hospital and Diagnostic Services Act) and on payment of physicians and surgeons for services rendered (Medical Care Act). The new legislation will permit the provinces to spend federal funds on such things as chronic and ambulatory care facilities and the remuneration of health professionals other than physicians and surgeons. Consequently, the flexibility of the provincial health care systems will be greatly increased.

Ottawa assumes that the provinces will be able to develop new health care programs within the framework of the existing national health standards of the hospital insurance and medical care programs relating to com-

prehensiveness of insured services, universality, accessibility and portability. However, what may happen is that the provinces will evolve quite different health care systems with even greater inter-provincial differences in the extent of coverage and quality of care than exist at present. In this regard, Ottawa's insistence on national guidelines and the maintenance of national standards may be of crucial importance in ensuring the continued evolution of a system wherein an equitable standard of care is equally available to all Canadians.

SOME ASPECTS OF THE FUTURE OF HEALTH CARE IN ONTARIO

Ontario, the most populous and most wealthy of all the Canadian Provinces, has evolved an extensive and costly health care system. Coverage by Ontario's health insurance scheme extends far beyond the minimum guidelines established by federal legislation. The Province has a physician/population ratio which is among the most favorable in the world and a hospital bed/population ratio of similar magnitude. However, there is no good evidence that the health of the people of this province is significantly better than that of the people of other provinces or of other countries characterized by similar economic development.

Ontario's health care system is poorly co-ordinated, beset with fragmentation and duplication of facilities and personnel, and escalating in cost at a rate which challenges the public's willingness to pay. Health care planners are now considering a number of mechanisms through which the health care delivery system could be rationalized, costs be controlled, and the quality of care preserved, if not enhanced. We will consider some of these mechanisms as our discussion turns to the regionalization of health services, community health centres and the remuneration of physicians.

REGIONALIZATION OF HEALTH SERVICES

The regional organization of health services has been a matter of concern and study by the Government of Ontario since the publication of the Hall Commission report in 1964. In its simplest terms, as applied to the health field, regional organization (regionalization) refers to the establishment of working relationships among various health facilities and programs within a geographical area. The general purpose of regional organization for health is to maximize the quality and quantity of care available to the general population by the process of sharing limited skills and facilities. Regional management of health services would presumably facilitate the integration of provision of such varied services as home care, preventive and rehabilitative medicine, diagnostic, therapeutic, psychiatric and social services, and by avoiding costly duplications of facilities and services would effectively control both capital and operational costs. The recent reduction and amalgamation of obstetrical units in a number of provincial hospitals is an example of the kind of cost saving coordination of care which might be expected under a regionalized health care system. Early in 1970 a report by the Ontario Council of Health suggested that regional and district boards be composed of a balance of consumers and providers of health services, indicating that the regional referral areas used by the Ontario Hospital Services Commission might be suitable regional areas of operation, and recommend that a detailed study of the whole concept be initiated without delay.

The Council's recommendations led to the appointment of a task force to consider the development of a system for the regional organization of health services in the Hamilton area. The subsequent task force report outlined a Hamilton centered plan with five district health councils supported by a regional council of health with specific executive authority. The task force report was based on the premises that:

1. the integration at the provincial level of the activities of all departments and agencies concerned with health and social services would be carried out as recommended by the Ontario Council of Health; and
2. that an effective financial system would be established which would support a regionalized health program.

The recommendations of the task force have yet to be implemented. On January 16th of this year a Task Force on Health Planning was announced by Health Minister Dr. Richard Potter, to "develop proposals for a comprehensive plan to meet the health needs of the people of Ontario. The plan should be realizable with the forecast available fiscal resources and should provide for implementation by voluntary means. The plan should also provide for the eventual coordination of health and social services". It would appear that the Ministry is in a muddle and that this new Task Force is being asked to repeat much of the work of the Ontario Council of Health and the Hamilton Task Force. This latest task force is to report by mid-summer of this year and it is expected by most observers that the recommendation will again be made that the local bodies which will be responsible for coordinating district health services will be empowered with administrative and fiscal authority.

The Government of Ontario appears to be stumbling along to some form of regionalization of health services. Under the Design for Development Program it is the clear intent of the Government to decentralize services and emphasize local involvement in programs and services.

Regional organization of health services remains a distant goal in the Province of Ontario. It is clear that any changes will be very gradual since there is as yet no firm plan and no timetable for change exists. This, coupled with the fact that any change that does come

about is to be effected by voluntary means suggests that the present costly and expensive system will remain in existence for some years to come.

What would happen if health services were to become the responsibility of local government? Is it possible that this would lead to more fragmentation than currently exists? Would subjecting health care to the direct involvement of the political process lead to disastrous results in terms of variations in standards of care and levels of service? Would such a situation be acceptable to the medical profession in this province? Regionalization of health services is coming. The questions are: how? when? and with what effects?

COMMUNITY HEALTH CENTERS

Canadian interest in the concept of community health centers resulted in the July, 1972, release of the report of the Community Health Center Project. This Project had been established by the Minister of National Health and Welfare for the general purposes of collecting and assessing information on existing types of community health centers in Canada and other countries and for making recommendations with respect to the appropriateness of, and likely problems associated with, the establishment of new community health centers throughout the country. The Community Health Center Project was headed by Dr. John Hastings of this university and its report is based on a one year study during which the Committee commissioned 92 position papers and received 126 briefs related to its investigation.

In commenting on the reasons for interest on the part of government in community health centers the report makes it quite clear that economic considerations are of major importance. It is suggested that community health centers might help in achieving some economies within the health services system by reducing hospital in-patient use and emphasizing the utilization of ambulatory services. This cost-saving mechanism, however, must be considered in relation to the importance of providing other alternatives to acute care hospital beds such as extended care facilities and home care programs. Another manner in which the community health centers might help to cut the cost of providing health services relates to increasing the productivity and effectiveness of health workers. The report considers it possible to substitute less highly trained professional and technical personnel for more skilled personnel, in organized and supervised settings, without any danger to public safety or dimunition in the quality of health care.

Since the public is becoming more sophisticated and more demanding in terms of the health services which it requires, the implementation of comprehensive hospital and medical insurance programs have been of great importance in increasing the quantity and range of public demand for service. Availability of such programs has become a central issue and community health centers are seen as a solution to this problem. The Hastings Committee also suggests that community health centers be used as a setting for the provision of the formal and informal education necessary to change public attitudes in relation to the demand for service, individual responsibility for personal and family health, and the limitations of modern scientific medicine.

The report states that the chief concern of the Ministers and Treasury Board officials is cost — the high cost of health services, the rapid rate at which spending is increasing and the open-ended, piecemeal financing arrangements. Cost problems are aggravated by fragmentation and duplication of facilities, by current methods of payment to professionals and by weak joint planning for facilities, manpower and services.

The wider concern of government relates to the role of the two levels of government in the provision of health services and the public's willingness to pay the cost of providing resources and services in a manner and amount commensurate with the demand that has been created by the generalized assumption that health care is a right of every citizen in this country.

I do not propose to review the Hastings Committee's concept of the community health center for this is detailed most admirably in its report. The report reads, in part:

> "the committee sees a community health center as a facility, or intimately linked group of facilities, enabling individuals and families to obtain initial and continuing health care of high quality. Such care must be provided in an acceptable manner through a team of health professionals and other personnel working in an accessible and well-managed setting. The community health center must form part of a responsive and accountable health services system. In turn, the health services must be closely and effectively coordinated with the social and related services to help individuals, families, and communities deal with the many-sided problems of living".

What will probably happen in the near future is that the Provincial Government will support the development of community health centers that will be organized and operating along the general line of the Hastings Committee recommendations. These community health centers will be located in areas where, at present, easily accessible health and social services are relatively lacking. Rural areas, and some areas within the urban core might be the first sites of development of these centres. The existing health care delivery system in Ontario, specifically with respect to the provisions of ambulatory medical services, is currently so complex and uncoordinated that it seems unlikely that the government will attempt to force a major reorganization of the delivery system at the primary level. However, as community health centers evolve, and if they prove to gratify previously unmet health and social service needs with a significant lowering of cost, then a more broadly based community health center system may develop.

While the community health center may not become a widespread reality for many years, the evolution of the health care system in terms of its integration with the social services network is certainly a significant consideration. The Hastings Committee report discusses the importance of the integration of health and social services and sees this coming together at the level of the community health center as only a part of the greater integration of district health and social service programs including recreation, housing, education and so on. Central to the Committee's thinking is the establishment of provincial districts or areas for the administration of health and social services with strong representation by local citizens, allowing a firm local voice in establishing area priorities, in administration and in fiscal control.

It would seem that the widespread development of a community health center system might only take place within the structural framework of a regionalized health care system, as well as within the legal framework of revised federal-provincial health cost-sharing legislation.

THE REMUNERATION OF PHYSICIANS

Physicians' incomes have been a topic of public concern for several months. Reports of physicians defrauding the health insurance plan have become commonplace. What will be done to control abuses of the insurance scheme and to control the cost of providing physicians' services?

The Government has made it clear that there will be much closer scrutiny of billing practices of physicians in relation to the medical insurance scheme. Fraud will no longer be tolerated and questionable billing practices will be minimized by restatement of the plan's regulations. The insurance scheme has brought into operation a computerized system whereby it can analyze the practice patterns of all physicians who are billing the plan. Increasing scrutiny of billing and practice patterns is certainly coming and is unquestionably justified.

Salaries for physicians are coming but their range of application may be somewhat limited. Physicians in full-time hospital based practice (radiologists, pathologists and anesthetists) may be the first to be placed on salary and paid through hospital budgets. Physicians of all specialties working at university teaching hospitals may be put on salary as well. Physicians entering practice in community health centres will definitely be placed on salary, in keeping with the recommendations of the Hastings Committee.

Physicians who are in private practice and who are not involved in a significant amount of in-patient hospital care will probably continue to be paid through the insurance scheme on a fee-for-service basis. These people will be the most difficult for the government to regulate in terms of incomes since their practice situations are essentially removed from publicly funded facilities.

In considering how physicians will be paid in the future, one should keep in mind the impact that global budgeting will have on provincial financing of health care. The Province will have to decide how much money will be spent on the health care system and what proportion of that money will be spent in remuneration of physicians. Currently a physician can bill the insurance scheme for an essentially unlimited amount, that amount being determined by how much that physician is willing to work. Further, any number of physicians can currently set up practice in the Province and bill the insurance plan for the services which they provide. This means that the Government is operating an open-ended scheme in which there is no limit to the amount that can be paid toward the cost of medical services. Global budgeting implies a limit to the amount of money available to pay for these medical services and it is clear that some remuneration arrangement other than the currently open-ended fee-for-service method is essential if the cost of providing services is to be kept within the limits of the Province's ability to pay. This ability to pay is limited by the political and economic limits of taxation and by Government's decisions, in light of a myriad of political pressures, to allocate its financial resources to the Ministry of Health. The Ministry, in turn, must decide to what extent it is willing to allocate its financial resources to the remuneration of physicians.

The Hastings Committee reported that approximately one third of the physicians in Canada already obtain their income from some method or combination of methods other than pure fee-for-service, such as direct salaries or redistribution of pooled income.

The Ontario health care system may eventually evolve to such complete socialization that all physicians will be placed on governmental salaries but for the immediate future, at least, this seems unlikely. What will happen, however, is that a flexible system of remuneration will be maintained whereby physicians will be paid in a manner appropriate to the nature of their practice.

IN CONCLUSION

To even the most casual observer of the Canadian health care scene the thrust of increasing government involvement in the health care system must be clearly evident. Involvement by government has its roots in the division of legislative jurisdiction over health matters as defined in the British North America Act and has an intriguing history in the development of legislation pertaining to national hospital and medical insurance programs. The involvement of government in the financing of the Canadian health care system has entailed an enormous degree of responsibility for spending within the system as well as a responsibility for ensuring the maintenance of adequate standards of care and assuring equitable access to services for all Canadians. The new Federal-Provincial cost-sharing proposals evidence government's concern with rationalizing the health care delivery system and maintaining control over costs. At

the same time, provisions are being made by both levels of government for increasing the range of services which will be insured under provincial programs. Canada is well on her way to the development of a totally comprehensive, national health insurance program.

Whether or not the continuing evolution of the Canadian health care system will be characterized by co-operation between government and the health care professions remains to be seen.

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not a family physician, and if they want to be consultants, then they should expect to be just that and be paid for it and not be able to operate as a family physician at a consultant rate. I don't know how much of that is going on — I haven't any idea.

JOURNAL: Certainly, there's been an increase in the use of medical services since the inception of Provincial Health Care?

DR. POTTER: There has been a terrific increase in use of medical services and I think that this is the thing that happens when a service is provided through an insuring agency. When people are paying for something themselves, they have a tendency not to use it as much and if they're not paying for it, well naturally, they are going to use it a bit more. This is why we're starting, (I sure hope to get it going this spring), on a program which will be an ongoing information program and in which we will have the OMA and the College of Physicians and Surgeons, the dentists, the Red Cross and the Cancer Society. They've all indicated their willingness to help with input, in involved research and so on. In that way, we can have good communication with the public through all of the news media, in order to point out to them what our health program is, what our facilities are, where they are, how they should be used, what happens when they are abused, and how they can do their part to help them meet the ever-increasing cost. This is something that has been badly neglected that we're going to start developing now.

JOURNAL: Do you feel that Ontario — five, ten years hence — will be a good place to practise medicine?

DR. POTTER: I think it'll be wonderful! Yes, I do. I have all the confidence in the world in the profession and I'm sure that they will be able to demonstrate to the public and the Government that they are capable of looking after their own house and that they will be able to work with Government and develop a program that will be in the best interest of the public. I'll be very disappointed if it doesn't happen that way.

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this is hypnotism comes with animal experiments. Acupuncture analgesia has been used on mules, dogs, cats and was even tried on a hippopotamus. All have been successful with the exception of the hippo whose hide was too tough to be penetrated effectively.

Acupuncture analgesia almost has to be seen to be believed. But it will no doubt have as great an impact on anaesthesia here as it has in China (but not until the political situation is such that we can learn the technique from the Chinese). Acupuncture therapy is something else and will probably gain popularity as an alternative form of treatment sought after fiercely by people (and there are many) who have not been treated successfully with western techniques. It is interesting to note that acupuncture therapy has been practiced in England and France for decades (even said to have been practiced since Marco Polo returned from Cathay) and is covered by the public health insurance plan in England.

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(Continued from page 117)

Master now has, and that the University of Toronto medical school is now trying to create. In fact the use of a self-study lab in conjunction with programmed self-instruction brings many advantages over the student-tutor system; in the first place no tutor can be made available twenty-four hours per day as can a laboratory; secondly, no one tutor can be armed with knowledge as complete as can a well equipped laboratory; thirdly, no one tutor can deliver explanations that are as coherent, smooth and polished as those delivered by a well-produced, mediated instructional package. As well, no individual can be as patient or as impartial as a machine, a book or a videotape.

I have attempted to show that programmed self-instruction is a method that simulates the one-to-one contact method of teaching. Whereas the student-mentor relationship may be ideal in an Utopian sense, it is not without its faults; in the very least, it is impractical in terms of available teacher manhours. I maintain that properly programmed self-instruction is a feasible and superior-working alternative to the present system of lecture-oriented teaching in that it is efficient in terms of learning and manpower (once a package is produced it can be used by any and every medical school on the continent). Clearly programmed self-instruction is the answer for individual learning.

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The Princess Margaret Hospital provides complete facilities for cancer research, diagnosis and treatment, exclusive of major surgery. Over 4,500 new patients are seen annually; there are 175 active treatment beds.

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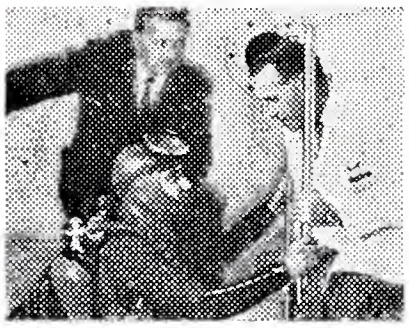

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